

This Month's Cover

Most military seers agree that amphibious operations will have an important role in any war in the fore-seeable future. They also agree that much of the old familiar amphibious equipment will not appear on the scene. Our cover artist stirred up his imagination and produced this version of some future assault on a hostile beach. LtCol Robert E. Cushman speculates in a more scholarly vein, beginning on page 10.

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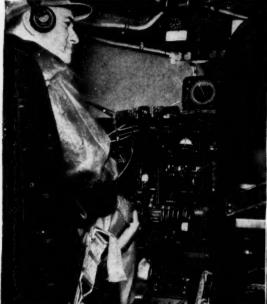
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Passing in Review

BOOKS OF INTEREST TO MARINE READERS

From the Skies . . .

AIRBORNE WARFARE—MajGen James M. Gavin, 106 pages, sketch maps. Washington, D. C., Infantry Journal Press. \$3.00

Gen Gavin, who began his airborne career as a captain with the Provisional Parachute Group in 1940, participated in all of the American airborne efforts of the European Theatre, and finished the war as a major general commanding the 82d Airborne Division, speaks as an eye-witness of our pioneer efforts in the air-delivery of combat troops.

He gives a rapid, condensed account of each of the Allied European airborne operations, and an outline of the Corregidor attack in the Pacific. The essentials of each are so skillfully outlined, that one wishes he had found space to include the other Pacific efforts such as those in New Guinea and Burma, as well as at least an outline of the extensive German and Russian uses of vertical envelopment.

One of the most interesting aspects of Gen Gavin's first-hand account of the operations is the very evident fact that development of doctrine, technique and equipment was being performed concurrently with the planning and execution of the assaults. The difficulties of such proceedings are related with understandable understatement. The student of amphibious warfare can note them and be thankful that the difficulties of his art, so painfully exposed at Gallipoli, did not prevent the Marine Corps, through twenty years of effort, from developing doctrine, technique, and equipment whose soundness and validity were proved by the course of the war. Gen Gavin states "If our development of equipment for amphibious warfare were as retarded as our development for airborne warfare has been, we would have made the Normandy assault in row boats." His book shows that there was the same disparity in the development of doctrine and technique.

As is natural in such cases, he goes into much greater detail concerning the tactical aspects than he does into the logistical problems of airborne operations. That these may well be such as to place the greatest restrictions upon the development of airborne operations is indicated by the fact that the recovery of parachute-dropped supplies was seldom as large as 50 per cent and that it took one-third of the men landed to recover that amount.

The problem of packaging, rigging parachutes, loading and providing aircraft to allow for a 50 per cent loss must be a glum prospect for the supply officer. And at the receiving end there is no assurance that the probable loss will be evenly distributed over the various supplies. The airborne soldier's lot may well be a hungry one. Marksmanship and fire discipline must be at a premium.

The logistic problem does not end there either. For as the author indicates, large forces with any staying power require the early capture of airfields of a size and solid construction that can handle large numbers of heavy craft. The problem seems to be that we can airlift hundreds of tons, but we can't get it out of the planes, off the fields, or distributed to the troops. And without the proper airfields we can't even land it, or the heavy equipment needed for distribution.

When Gen Gavin writes for the future of airborne operations he does it so persuasively the reader has to pause to remind himself that the author is naturally an enthusiast for his specialty. Which, it may be, leads him into the same error committed by Mitchell and Douhet, that of allowing his specialty the advantage of every conceivable improvement, including those not yet technically forseeable, while restricting the defense to equipment and methods of the last war. Jet-propelled fighters, proximity fuses, antiaircraft guided missiles and new radar devices are conceded by many far-seeing airmen to have made obsolescent the present relatively slow, clumsy, heavy bomber. The same devices should be just as deadly to even slower, clumsier transports which are restricted in allowable evasive action. Combined with them will undoubtedly be more mobile, more resilient, and better trained and equipped antiairborne defenses than were improvised in the last war. Of probably greater significance, defending forces will be much more resistant to the form of nervous paralysis induced by the unac customed nature of airborne defense.

The almost completely airborne war of the future envisioned by Gen Gavin may well occur, but in the light of forseeable and feasible improvements it seems likely to occur in the days of the children of children as yet unborn. It is much more likely that for many years airborne efforts will be improved versions of the operations of the last war. That is; highly specialized assaults, designed to assist, and be relieved by, heavier attacks by a major ground force, and under circumstances in which

the airborne troops are assured of relief within a few days.

Such cautionary notes as those above are not intended to belittle progressive efforts in airborne matters. It must be remembered that the seekers after revolutionary perfection are those who cause the imperfect evolution of progress. *Airborne Warjare* is a book which should be read and thought about carefully.

Propaganda . . .

PSYCHOLOGICAL WARFARE—Paul M. A. Linebarger. 259 pages, illustrated and indexed. Washington: Infantry Journal Press. \$3.50

Beginning with a brief history of psychological warfare, its functions and a definition, the author continues with a more detailed history of its use in World Wars I and II. The second and third parts of the book deal with propaganda analysis and intelligence including the estimate of the situation, and planning and operations respectively. The book, written in a light vein, treats a heavy but somewhat intangible subject in a manner that makes it easy to read and understand. The subject is well surveyed from the national level down to individual contributions to the psychological defeat of the enemy.

The author does not claim that psychological warfare can win a war itself. He points out, in fact, that psychological victory exists only in terms of military victory which psychological warfare is designed to assist, and that psychological defeat can only be proved to exist when an actual defeat makes it real. From his knowledge of the subject he has come to the conclusion that the best propaganda is the truth although he points out that it must be slanted in order to be good propaganda.

The book is profusely illustrated with some seventy cuts (a few of which require a magnifying glass for the small type) covering various kinds of propaganda, and ten charts showing psychological warfare organizations at different levels and methods of procedure in producing propaganda. The illustrations could have been keyed in the book so that they were on the same or facing page of the text that refers to them but they were not.

This is a down-to-earth book which explains clearly and in uncomplicated language what psychological warfare is, what it does, and how it does it. It provides an answer to the question "why does the United States need an information service in foreign countries"—an answer every military man needs to be able to explain it to his civilian friends.

Mr Linebarger is at present professor of Asiatic Politics at the school of Advanced International studies in Washington, D. C. He has written various articles on psychological warfare for which he was well qualified, having served during the war in the Special Study Group. G-2, War Department General Staff; as Chief, Far East-

ern Branch, Psychological Warfare Branch, Military Intelligence Service; as Far Eastern Expert to the Operations Planning and Intelligence Board, Overseas Branch, Office of War Information; and as an army officer in the China-Burma-India theater. In 1945 he was put in charge of the Far Eastern functions of the Propaganda Branch, G-2 War Department General Staff. He has lived in China and is also the author of three published books on Chinese politics.

Blueprint for Peace . . .

THE PRICE OF POWER—Hanson W. Baldwin, 361 pages, New York: Harper Brothers. \$3.75

A "feet-in-the-mud-eyes-on-the-stars" approach to the massive problem facing the United States as one of the protagonists in a "bi-polar" world is urged by the author in *The Price of Power*. Such an approach entails our passage along a middle road, avoiding on the one hand the evils of a "garrison state" and on the other those of a "bankrupt state," to the fulfilment of the responsibilities which are now ours and the maintenance of national security. Success, Mr Baldwin believes, can be achieved but in the final analysis will depend upon the American people—their willingness to accept their role and their steadfastness in playing it out.

The basic dilemma is how to defend the United States in this atomic age without permitting the necessary increase in military efficiency to jeopardize our traditional way of life. In making an estimate of the situation upon which to base his solution, the author reaches the inevitable conclusion that the last war has resulted in "bipolarization" of the world—U. S. vis a vis U. S. S. R. The British Empire is irretrievably bound to our side; the other one-time major powers are pawns. A resurgent Germany and, to a lesser extent, Japan may one day tip the scales.

The plan developed by the author envisages a revised strategy based on the realization that "defense" must now consist of the ability to hit back with such speed and power that attack against the United States would be doomed from the start. For the first time since the Indian wars of the last century we have "live frontiers," the oceans and the polar ice cap no longer being effective barriers against an enemy armed with the Buck Rogers weapons now in the process of development. Thus we must be ready to counterattack from advanced bases and "positions in readiness" as close as possible to the heartland of the foe. England is our most vital "position in readiness," opines Mr Baldwin, for it is his theory that the "fringeland" of western Europe outweighs in strategic value that of eastern Asia.

Implementation of this new strategy necessitates revised tactics. Their foundation rests upon the roles and missions of the various services. The "unification act" is

called "in general sound" but not the "final solution." True to his thesis of civilian control of the nation, the author sees a potential hazard in the Joint Staff "modeled by some of our Army planners in the close image of the Greater German General Staff to supplement and uphold the centralized authority of a single chief of staff" unless it is "restricted to the frame of 1947's legislation." In the streamlining of our forces primary importance is given to a strategic air force capable of carrying war to the enemy anywhere in the world. Second to that air force but also having "Al priority" is a navy "comprising its own ship-based air power and the weapons needed to assault enemy coasts and to control the seas." But to accomplish this end, according to Mr Baldwin, the present Navy is overstrength and does not need a Marine Corps greater than 60,000 to 75,000 men. This may appear inconsistent with his concept of a strategy predicated largely upon the possession of advanced bases.

This thread of inconsistency seems to run through the author's solution to the manpower problem. Stressing "combat readiness" rather than "mobilization potential,"

he finds the presently planned numerical strength of the reserve components far too high. Nevertheless he admits the possibility in a future war of expansion "to very large mass forces."

Interesting is this passage-"Our regular forces in peacetime must be highly trained, instantly ready, longterm professional troops. Their morale and their philosophy must be that of the professional soldier, who does not serve for pay alone, but for the love of it, the glory of it, the service of it; they must be men who take pride in the uniform, a quality that lies at the very root of military efficiency and one that is too rare in the modern services. We must have our own Gurkhas, our own Tommy Atkinses, who can accustom themselves to severe duty, occasional skirmishing, and intermittent casualties in time of peace-in fact as part of the price of peacewithout the persecution complex or hero psychosis of the drafted or civilian soldier, and without arousing international crises or fear of war." Some readers may feel that Mr Baldwin has not far to look for such a force.

RCB

From: George T. Bullen, National Commandant, Marine Corps League, Incorporated.

To: All Marines on Active Duty.
Subject: The Marine Corps League.

Greetings. This is a cordial invitation to every Marine on active duty, regular or reserve, to become affiliated with the Marine Corps League as a member-at-large. In the past our rules required that each member had to join a local Detachment but our National Staff has now amended this rule. Every Marine now on active duty may join either a local Detachment or become a member-at-large on payment of the national dues of only \$2 per year.

The League, chartered by Congress in 1937, is the only organization in the United States comprised entirely of Marines and former Marines, and completely dedicated to Marines' interests. The principal purposes of the League are: (a) to preserve the traditions and promote the interests of the United States Marine Corps; (b) to band those who are now serving in the United States Marine Corps and those who have been honorably discharged from that service together in fellowship that they may effectively promote the ideals of American freedom and democracy; and (c), to assist any Marines or members of a Marine's family in need.

The League has constantly maintained an active program of close cooperation with the Marine Corps, aiding local Marine Stations wherever possible, assisting with regular and reserve recruiting drives; promoting and staging Marine Birthday affairs and aiding the Corps and its personnel wherever needed.

In order to more effectively accomplish its many worthy objectives, the League must maintain a large membership. Please talk up the cause of our fraternal fellowship to every former Marine you know and to improve our mutual interest we will welcome your personal affiliation.

Semper Fidelis, GEORGE T. BULLEN

For further information, address: Marine Corps League, Inc., 28 Howard Street, Albany 7, New York.

Profession of Arms

By Maj Phillips D. Carleton

IT IS NOT SURPRISING THAT IN A TIME OF STRESS following a war large numbers of officers from the Armed Services are appointed to posts in the civilian arm of Government. These appointments need not have the sinister stress placed upon them by the traditional fear of the military displayed in a democratic country.1 As a war ends, large numbers of civilian leaders who have left their businesses, their professions, or their administrative jobs to serve during the emergency resume their private duties. For a long period after a war, however, the responsibilities of centralized administration remain heavy and complicated; the low salaries paid by Government in comparison to private industry offer no temptation to industrial executives to abandon permanently their positions in private life. It is natural under these circumstances that the President draw on the great pool of trained and proved administrators within the Government service itself-the Armed Services.

The objections offered to placing officers from the Armed Services in top governmental positions do not usually claim that such officers are ill-trained or incapable of filling those positions. Obviously, a young man who has, since he first received his commission, been preoccupied exclusively with the problems of "leadership" and administration, who has risen slowly up the ladder of rank and performed a wide variety of tasks, and who has, finally, proved his ability in command and administration in the bruising contacts of war, has been well and strenuously trained. The critics argue, first, that the military man has received his training in an authoritarian organization very rigid in its hierarchical structure, and second, that this training has been narrowly specialized: the military man has been cut off from the political and economic currents of his time.

The structures of Government organization and those of the Armed Services do not differ so widely as at first glance one would think. The Government organization is probably looser and more flexible; the echelons of the hierarchy are less carefully knit; the Government executive is likely to build his organization around a function rather than try to fit a new function into a completed structure; the Government executive has greater power in

initiating wide changes; but essentially both types of organization perform the same type of function.2 In the second place, apart from the technology of the business or profession, administration is a science with fundamental principles and laws that apply no matter what is being administered. This unity of principles was effectively illustrated during the war, when a railroad executive took over the direction of the synthetic rubber program, when a banker became the chief civilian director of the Navy, and when an expert in sales management directed industrial mobilization.3 The basic principles of administration were the same; the knowledge of technology could be supplied by specialist or staff officers. The basic similarity is nowhere better illustrated than in the one point that to the layman seems to separate irrevocably civilian from military organization; the absolute authority of the military system as compared to the seemingly lenient controls of a civilian system. Both systems depend for their efficiency not only on the consent of the governed, but on their active participation. Neither the harshest discipline nor the granting of great individual freedom will make the organization effective unless the personnel acknowledge the authority and do more than acquiesce; in other words, no organization without morale can function very long.

The one fundamental way in which military organization differs from all civilian administration is in its preparation for the deaths of its members. In the final analysis this consideration has influenced not only the primary structure but the whole process of directing it. In the first place, the military services have devised a rigid system whose parts dovetail and duplicate one another from the bottom to the top; this system theoretically provides for all the functions of the Services and into it can be fitted new functions as the need occurs. Young officers coming into the service are made thoroughly familiar

¹See: Hanson Baldwin: The Military Move In, Harper's Magazine, December 1947, for a typical point of view on this matter. The basic assumption of the article is that the professional military man must think, consciously or unconsciously, in terms of military aggrandizement and that therefore his capabilities as an administrator are not transferrable.

²See: Industrial Mobilization for War, Volume I, Program and Administration, for a recent study of Governmental organization. This book, published by the Civilian Production Administration and for sale by the Superintendent of Documents, surveys the successive organizations set up within the Executive Office of the President to correlate and direct civilian production during the war. By far the greater part of the book discusses the War Production Board, the changing problems it faced, and the administrative procedures adopted to solve them. Of particular interest is the study of the relations between civilian and military authorities.

³Chester I. Barnard, president of the New Jersey Bell Telephone Co., has written an interesting book on these basic principles of administration: *The Functions of the Executive, Cambridge*; Harvard University Press, 1938.

with this structure and taught to use their particular abilities within it. The office is emphasized not the officer. A commentator on public administration has remarked somewhat ruefully that the young officer under this system seems to have an innate sense for administration entirely lacking in the average civilian official of the same age. As a result of this standardized structure and standardized training, a battle machine can operate efficiently even though key officers become casualties. Every post can be filled from below. The last war offered a good many examples of the effectiveness of this training. (It is tempting to point out here that much of the layman's criticism of the stratifications within the military order are based on his ignorance of this essential reason for the military structure: that almost every rule in the Armed Services is conditioned by this fact of contemplated death.)

THIS STIFF PYRAMID OF POWER OFFERS certain persistent problems, some of which possibly cannot be solved, others of which have never been wholly satisfactorily solved. These problems are not, however, peculiar to the Armed Services:

1. In any highly centralized organization, the flow of orders or the dissemination of information from the top is simple and effective. At any time an individual marine can be caught upon a needle point and examined; specific directions can be sent to the farthest outpost. The flow of information from the bottom to the top is, however, beset with many necessary difficulties. Many suggestions from the field never get beyond the sender, but are quite properly quenched by his superior officer; other suggestions, perhaps very valuable to the men in the field. do get up to the highest echelon, however, where they are promptly sifted. The suggestion may die then and there or it may be shunted through the several departments and finally be turned down simply because the exigencies of the field seem remote and the time lapse has destroyed the urgency. If the Commandant decides that he will establish a buffer echelon in the field to examine these suggestions nearer the point of origin, he sets up a block between himself and the field which renders his control more remote than before.4 An interesting example of blocked channels is given in the recently published history of the Office of Scientific Research and Development:

"He [the scientist] became interested also in the effects of fatigue on radio operators, especially those in Marine units, and urged Marine officers to request OSRD help in studying this problem. Unfortunately, in the allocation of scientific aid the Marines were a stepchild throughout most of the war, not because they did not need it or because the scientists were hesitant to work with them, but because their requests had to be filtered through channels where they were frequently blocked."5

2. The second problem is related to the first, and in its way, is unanswerable: Obviously, the highest echelon cannot refer all important matters to the field for comment, and certainly it should not; still, a negative decision by the general staff removes the possibility of any comment from the field. The general staff may test a submachine gun in the states under all conditions and finally send it to troops. Under battle conditions the gun may fail miserably. Eventually, complaints and suggestions from the field come in; the gun is discarded or improved. This would be routine practice. If, however, the high echelon had decided not to use a weapon or a system, the matter would be closed. It is interesting to note that the Marine Corps, after exhaustive tests, decided against issuing benzedrine to troops in landing operations. Consequently, benzedrine never had full-scale testing under battle conditions. (I am not suggesting here that the Corps should have decided otherwise; I am merely pointing out that negative decisions taken at the top are largely irrevocable.)

3. All scalar, i.e., hierarchical, organizations are plagued with the problem of lateral communication; very little provision is made or can be formally made for the interchange of knowledge between parallel echelons. The larger and the more important the echelons, the more difficult is it to maintain the interchange of knowledge. A liaison officer almost by definition has very little authority and almost no specific duty; adequate knowledge of another large organization or unit cannot be maintained by one or two liaison officers; for full knowledge almost a duplicate set of officers would have to be established in each organization. In small units liaison is usually preserved by informal contacts or devices such as that of establishing a single regimental mess for all officers or simply by locating all units of a command in a fairly tight area that will emphasize the unity of the command and the interdependence of services. In larger units this type of informal liaison becomes difficult or impossible; between units of different services slight differences in custom reduce contacts.

4. In a military organization, the staff sections of any large unit, which have been set up to aid the Commanding General, may, paradoxically, cut him off from his own troops; i.e., in the very necessary task of accumulating information and interpreting it they force the General to see through their eyes and to base his reasoning on their-reasoning. To some extent the history of modern

⁴These and other problems of organizational control are discussed in a curious book which is the revised and published version of a series of lectures given to officer classes by a British psychologist with an unusual knowledge of both military and governmental affairs: J. T. MacCurdy: The Structure of Morale, New York: The Macmillan Co., 1943.

⁵L. R. Thiesmeyer and John E. Burchard: *Combat Scientists*, Boston: Little Brown and Co., 1947. The quotation is from page 220.

warfare is the history of a Commanding General attempting to bypass his staff and to secure for himself first hand information. Partly the General may do this by personal inspection of the lines, but the task even within a division is almost superhuman. More regularly the General struggles to revive in more modern form the system of young aides and couriers which in more primitive days surrounded him. He may use under his direct command the scouts and snipers of a division or employ as his personal observer a liaison officer in a Grasshopper plane. During training periods of the last war, certain Marine division commanders made very effective use of the division inspector as their personal representative and the inspector became a very lively and effective part of the organization.

5. It is characteristic of a military organization that it can be radically changed from the top without any alteration in the efficiency of its functioning, provided the lines of command remain clear and the boxes of the echelons conform generally to the book. Generally, a military organization will accommodate itself to a new function, as I have said before, not by changing its structure but by fitting the function into an echelon. A corps by definition is an operational not an administrative unit. Usually, if it tries to combine both missions, it is inefficient in both.

⁶General J. F. C. Fuller of the British Army pointed out these difficulties of the staff system a decade after World War I: *Generalship*: Its Diseases and Their Cure, London: Faber and Faber, 1933; Harrisburg, Pa.; Military Services Publishing Co., 1936.

But there is the unusual case of the V Amphibious Corps set up at Pearl Harbor, which was, before the establishment of the Fleet Marine Force, an administrative as well as an operational center in the Pacific. These two missions it accomplished by what was in essence a duplicate set of headquarters. When V Corps sailed for the Marianas, it had three sets of headquarters: one remained at Pearl Harbor to carry on administrative duties; a second sailed aboard the Rocky Mount to control the whole campaign; a third went ashore after the first landings to establish the headquarters of the Northern Troops and Landing Force. The anomalies of this situation were to some extent relieved, of course, by the creation of the Fleet Marine Force.

These are characteristic military problems, but to a lesser degree they plague every industrial executive, any college president, or the high officials of the world's most ancient organization, the Catholic Church. It is surprising, however, that there is not a larger literature on these common problems. Government has, of course, come most directly under the scrutiny of those interested in administration. For an informal account of the difficulties of Government administration, there is the book written by a former executive officer of the Department of agriculture.⁷

US MC

⁷Paul H. Appleby: Big Democracy, New York: Alfred A. Knopf, 1945.

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The Marine Corps Gazette

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This Month and Next

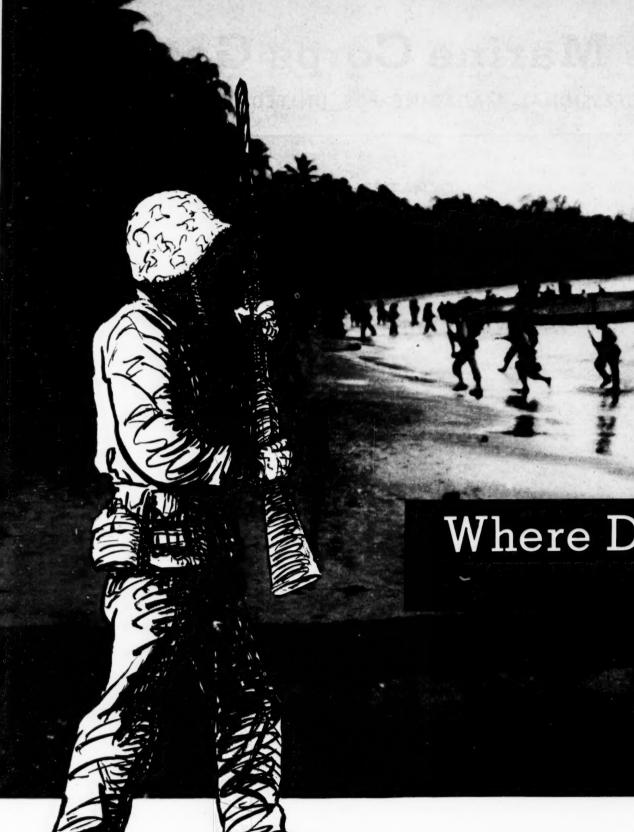
NEXT MONTH we begin a series on the development of naval gunfire support for amphibious operations. First in the series is Naval Gunfire Training in the Pacific by LtCol Robert D. Heinl, Jr. This will be followed in July and August by Naval Gunfire at Roi-Namur and Naval Gunfire at Guam, both by Comdr I. E. McMillian, USN.

Also in the June issue, Base Plate McGurk has some pertinent suggestions to make concerning Company Office Hours. Maj James A. Donovan, Jr., returns with Know Your Signals which concerns itself with tactical applica-

tion of pyrotechnics available to the small unit commander.

The Near Future of the LVT is discussed by Maj Victor J. Croizat. The practicality of Competitive Examinations for NCOs is examined by LtCol Charles L. Banks and MSgt L. J. Donahue. They Test the Jets by Maj James A. Pounds outlines the work done by Marine test pilots assigned to Patuxent, Md.

In the Fletcher Pratt series, Marines in the Pacific War, the 1st and 6th Marine Divisions take Shuri and Sugar Loaf respectively in the heavy fighting to the south on Okinawa.



Where Do We



This is the atomic age! Amphibious operations are out of date—all you need are airplanes and the Bomb."

There are a lot of self-styled prophets singing this refrain these days (usually with an axe to grind well hidden in the background), and it behooves us as marines to look into the fallacy of this reasoning and also to look into the future and chart our course.

As a point of departure let us examine our present status. Where do we stand today? It is evident that we can point with pride to our position as the originators and teachers of a doctrine which was the sound basis for the amphibious operations of the past war. We likewise note on the record that we were the executors of the tactics and technique of the landing attack in a sufficient number of operations to have contributed materially to the success of our country's arms against Japan. Finally

we are recognized as an integral part of the Fleet, as an important instrument in the application of sea power. In short, the Marine Corps has now rationalized the doctrine and perfected the technique of the amphibious operation so that a very high degree of excellence would be attained in any such attack undertaken today with present equipment. To be sure, we are not perfect. Much work remains to be done and is being done to improve the present day amphibious operation. We must speed up the ship-to-shore movement, work out improved techniques for controlling exterior fires during that dash to the beach. There are other areas where improvements can be effected. But on the whole we have an eminently satisfactory solution.

But wait a minute! Don't lean back in that chair like a man that's just finished too big a steak, with fixin's. There's work to be done. We've got to figure out how to make a landing in the 1950s or even further in the future. Back in the lean days of the great depression, Marines were making actual landings in motor launches with nebulous fire support, but, and this is the important fact, at the same time they were doing the thinking and preparation which was to make the landings of the Second World War possible. The lesson is that we cannot stand still. Even were we so inclined, our mission will not let us rest on our laurels as we are charged by law with the development of amphibious warfare tactics. Furthermore, in this competitive world, there are always those who lie in wait for the leader to falter; hence we will be wise to continue to be "too fast for 'em."

Before we look into the future let us first refute the arguments of those who claim that we have no future. Since the Marine Corps is an integral part of the Fleet designed to seize and defend advanced naval bases, those who wish to argue that a Marine Corps is not necessary must prove that the Fleet is not necessary or that it will not need bases. Neither of these premises is tenable. To reach a decision against an enemy, those elements of our forces which close with the enemy must have staying power- they cannot be transient raiders-and thus will require bases of operation in proximity to the foe. The Navy is the instrument which provides the means for obtaining those bases. Initially it can establish floating and mobile bases off the hostile periphery, later support operations designed to gain footholds on the enemy shore itself. In performing these functions it must also control the seas, for the sea will remain the most economical medium for the transportation of men and materiel to carry the war to the enemy. Granted then that the Navy will have important functions to perform in war, it also must have advanced bases for its own support, otherwise it cannot most efficiently project its power across the vast stretches of water between us and the enemy. We Marines will take the advanced naval bases required. It seems clear

that although the surface engagement between opposing fleets may be a thing of the past, that the Naval campaign is most definitely here to stay and has a place in the future. Those who believe that now, or a hundred years from now, we can sit in the Western hemisphere, push buttons, and by this means alone manage to detonate enough high explosive, atomic or otherwise, to conquer the millions of people who hold the vast stretches of the Eurasian Continent are guilty of specious thinking. There is one thing which it is safe to prophesy would result from such a program—you would have an awful lot of people very mad at you!

THERE IS ANOTHER very important factor in relation to the future which has been said by several of our clearer thinkers but perhaps not loudly enough—namely that our Navy is our primary means of supporting and emphasizing our policies in time of peace. When local disturbances occur which it is to our interest to suppress, does anyone seriously suggest that we "atomize" the offenders, the hapless bystanders, and the surrounding countryside? No, but we certainly can employ the Fleet and its included Fleet Marine Force for the purpose of taking measures suited to the peacetime task, ranging from a show of force to offensive action of a limited nature as required by the local situation. Landings by Marines will surely figure largely in such Naval action.

The field of the amphibious operation thus extends into the future and our country has decided that it is our mission to continue its development. Let us examine this problem in more detail. It is twofold—we must seize and defend advanced naval bases. Amphibious operations and base defense—opposite sides of the same coin.

How must we direct ourselves in the solution of this problem? Until proven otherwise, we must base our development upon present basic principles-these have stood the test of centuries of time and we must presume them still valid. The big changes will occur in tactics and technique and in the related field of equipment. Now it is interesting to note that new equipment, new technical developments, can be introduced into the picture in two ways. An already existing item may present possibilities toward the solution of an existing problem of technique. On the other hand, an innovation in tactics or technique may only be possible by the use of some non-existent piece of equipment, which, if proper specifications are laid down and the desires of the tacticians made known, can then be developed to meet the need. Thus we must be ever alert to either press into service new materiel which was perhaps developed for some other purpose than the one which we propose, or to require the development of equipment which will permit us to execute new concepts of tactics and techniques.

One word describes the fundamental requirements which will shape all of our changes and development—

that word is dispersion. History teaches that each new weapon has introduced the need for greater dispersion and we are now faced with weapons whose radii of destruction are greater than the fantastic imaginings of the comic supplements. We are thus required to effect still greater dispersion than ever before, particularly in the amphibious operation where present methods of execution result in presenting to the defender a target of such value that it is worthy of attack even by such a scarce and strategic weapon as the atomic bomb. The difficulty is that the requirement of dispersion is at variance with, and militates against, several of our most important basic principles. The Principle of Mass-we concentrate our forces against the decisive point and we present that beautiful target again. Economy of Force-we disperse and then we don't have strength at the decisive point and are weak everywhere. The Offensive-the individual will probably feel that he would be better off in a deep hole in the ground! Simplicity-nothing could be more complex than attempting to control a widely dispersed landing force. Cooperation-combining the efforts of all parts upon the task at hand is made doubly difficult when those parts are dispersed.

ON THE OTHER HAND the principles of movement and surprise may be carried forward more easily by dispersed units. On the whole, however, dispersion will present us with many problems. First and foremost is that to obtain the required protection prior to close contact with the enemy while at the same time preserving the ability to mass our force at the point of decisive effort, we must be dispersed in space but not in time. Successive increments of the landing force must be widely separated by distance out on the ocean but must strike the enemy at the landing area within a short space of time. It is immediately apparent from this that the present type of landing craft will not satisfy our requirements. Let us say that waves should still hit the beach at five minute intervals as a round figure, easy to work with, in order to maintain the momentum of the assault. In the future, however, the waves will probably have to be separated by at least five miles of distance and may have to travel from fifty to a hundred miles from the transports in order for the force as a whole to have the required dispersion. The various waves will of necessity approach from divergent directions also, rather than one behind the other, until very close to the beach. These factors indicate a landing craft or conveyance speed of from sixty to a hundred miles per hour with an added ability to traverse its medium for considerable distances. It would appear that three approaches might be made toward this solution. One, waterborne landing craft with the above capabilities; two, airborne landing craft which could carry small tactical units, maintain formation during the actual landing, and land the troops as tactical

units in accordance with a tactical plan; and three, high speed air transports which could move each wave close into the shore, from where it could proceed to the beach in landing craft of conventional speeds. The first of these methods has much to recommend it but only the engineers can tell us if it is possible. It is, however, a method they could well be investigating in order to either prove or disprove the necessity for considering it. The second method would require some sort of aircraft whose characteristics permit it to select its landing point and thus land units in tactical formations. The third method would make necessary large seaplanes which could carry landing craft and troops.

Does a voice from the rear make itself heard at this point saying, "What you're talking about is airborne operations. Let's just go in as paratroopers." The answer is no. We are talking about an amphibious operation which, you will remember, is by definition an attack launched from the sea. It seems to me we should direct our efforts toward development of a method of ship-toshore movement by air which will accomplish the same result as one conducted by water; namely, landing the troops at the right place at the right time in the desired formation in accordance with the tactical plan. Paratroopers don't land that way nor can they take off from ships; hence we definitely are not considering the conventional airborne operation. In any event, an airborne operation makes a poor substitute for the precise, coordinated assault we have found necessary to take well defended advanced naval bases. We can do better than scatter paratroopers over the landscape and expect them to assault the fortifications characteristic of a desirable advanced naval base.

OUR FIRST PROBLEM, then, is to evolve a ship-to-shore movement which will give us the required dispersion in space yet will permit us to concentrate our efforts at the critical time and place. Next we are confronted with difficulties brought on by the dispersion of troops required by our solution to the ship-to-shore movement. Important among these is that of leadership. Command and leadership has always been a highly developed art in the Marine Corps. Faced with a wide dispersion of troops in future battles we must hold fast to the precepts we have always taught. Junior officers, and the responsible noncommissioned officers, must be leaders of the highest quality in order to properly command the small and dispersed tactical units which will be required in the future. As a corollary our training must continue, as it has in the past, to stress the development of leadership qualities among all ranks. A marine has always been a hardhitting and aggressive fighting man carried forward by his loyalty and pride in the Corps and in himself as a

marine—this spirit must be fostered and emphasized continually. Men must be prepared for much fighting by small units—units which present an unprofitable target to the enemy's major weapons. We train our troops now for just such action in the assault of a defended beach; we must make certain that we continue this instruction.

Dispersion will place an added burden upon signal communications; their range and reliability must be improved to keep pace with the increased separation of subordinate commands. In one way, we may benefit; perhaps we can get along with fewer channels since units will be widely separated, in which case the tight squeeze on number of frequencies available for radio might be alleviated somewhat.

Supply will not only have to retain its present flexibility but even improve upon it. Floating dumps may have to float in the air! With units fighting in many places the use of small unit rolling reserves may become necessary. Decentralization of dumps will be required—they are as vulnerable as troops when concentrated. Evacuation will become more difficult and new techniques must be worked out for this logistic function.

The above should give us something to think about, at least, as we seek to find the proper path for our efforts toward preparing for the future. In addition there are certain requirements in materiel which it would be well worth while to consider. We must give more protection and more mobility to our marine. Above all he must be imbued with the aggressive will to advance, for not only will it be decisive to close with the enemy, it will also be safest! Beyond that, protective equipment should be developed. We note that every analysis of battle casualties reveals the extremely high percentage caused by fragments from high explosive. With the advent of the proximity fuse and the use of showers of rockets delivered in a matter of seconds it is evident that more thought must be given to protection of the infantryman. The exhaustive experiments being conducted on light body armor should be continued. Conveyances used to land troops must include protection for embarked troops; in the case of waterborne landing craft this means overhead cover as well in order to shelter the occupants from air bursts. The use of lightly armored carriers for use in moving troops in areas subject to enemy interdiction fires should be considered. All methods which can be conceived by our materiel experts and brought to a state of practical usefulness should be exploited. But none of these methods should sacrifice mobility, for fast movement into close combat with the enemy will remain the surest way of removing our troops from the areas subject to the destructive effect of heavy high explosives.

All marines like to take the offensive, like to discuss the attack, prefer to conduct training in offensive combat. But we have to be prepared to defend those

bases that we seize! And we shall have to do that in the future also, as well as now. Without going into the details of building atom proof shelters and the many variations of technique that must be developed in relation to passive defensive measures against the weapons of the future, I believe it is safe to say that our primary concern must be to keep the defense as mobile and aggressive as possible. Once again we shall find that to pin our defenses entirely to fixed and static positions will invite destruction by powerful weapons. The decision must generally rest upon the offensive action of a general reserve committed with speed and aggressiveness against the enemy's main effort as soon as it can be determined. We must not make the attacker a free gift of the actual landing with all of its difficulties-that is his most vulnerable period and we must take some advantage of it. The answer is fire power, not masses of troops. Hit him with fire power as he lands, contain him as close to the landing point as possible, and hit him with everything that's left. And that "everything" should be the bulk of the force, held in mobile reserve. This principle is generally applicable now (there are of course special cases, such as atolls, wherein it will seldom be possible to employ this concept) and it will become more so in the future.

There is a final topic to be discussed under this general subject of preparing for the future, and that concerns the smooth functioning of the various elements of the Marine Corps toward the solution to the problem. Headquarters, the Fleet Marine Force, the Marine Corps Schools, and the Equipment Board all have complementary parts to

play, each of great importance to the success of the whole.

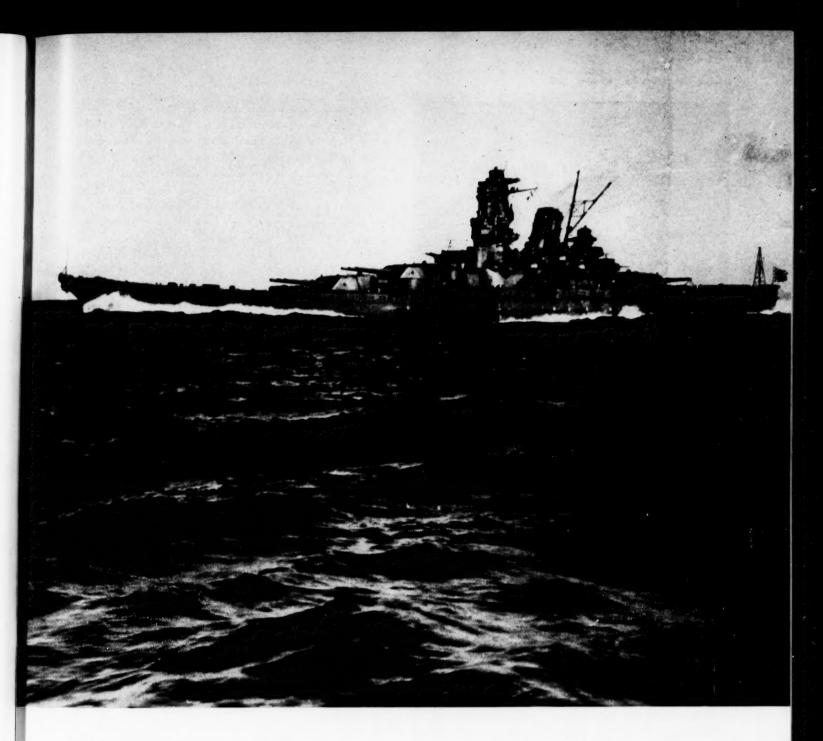
Headquarters, Marine Corps, exercises over-all direction of the development effort, establishing policies and coordinating efforts, assigning objectives and assessing results. Every marine should be using his head, thinking through the problems involved, trying to reach solutions, putting them forward in the GAZETTE to bring them to the attention of others; but primarily the Marine Corps Schools should be charged with the rationalization of doctrine which is required. Much of the theoretical side of the changed tactics and technique which must be evolved can best be done in the cloistered halls of Quantico. But then it must be put to the acid test-it must be given a trial by the troops in the field. The Fleet Marine Force can thoroughly exhaust the theories advanced by thorough testing in training and maneuvers. Finally the equipment we need must be developed and the Equipment Board has an important part to play in relation to this vital function.

It must be understood, of course, that such compartmentation as is theoretically set forth above would in actual fact be undesirable. But the above does indicate the primary assignment of missions which would be most advantageous. However, it should not be construed that the Fleet Marine Force, for example, shouldn't think up new doctrine, just because Marine Corps Schools are primarily charged with that function. Far from it! All hands must be continually working on all aspects of the problem within their capabilities so that the Marine Corps, in the future as in the past, may come up with the approved solution.

Fighting Presidents

- AT A TIME WHEN VOTERS all over the U. S. A. will be electing a Chief Executive for the next four years, it seems quite appropriate to recall the Presidents who weren't afraid to stick their chins out. Below you will find questions that ask you to identify ten "fighting Presidents." For each one you name correctly, credit yourself with 10 points. A score of 70 is fair, 80 is good, while 90 is excellent. The correct answers will be found on page 56.
 - 1. What President gave up college to become a soldier in the Revolutionary War?
 - 2. What President took his army across an icy river and won a famous victory on Christmas Day?
 - 3. What President echoed the nation's feelings about dictators when he flung out the challenge, "We would rather die on our feet than live on our knees"?
 - 4. What President led his army four hundred

- miles down the Mississippi to win a smashing victory over the invading enemy at a minimum cost in casualties?
- 5. What President was popularly known as "Old Three Stars"?
- 6. What President has gone down in history as "the Father of the American Navy"?
- 7. What President resigned a Cabinet position to organize a famous cavalry regiment and to lead it against the enemy?
- 8. What President was a volunteer in an Indian war and was chosen captain of his company?
- 9. What President rejected the enemy's demand to surrender, and with his order "A little more grape" to his artillery captain, turned a threatened defeat into a victory?
- 10. What President was principal of a preparatory school at the outbreak of the Civil War, and organized his students into a regiment?



The Last Days

of the

YAMATO

▶ AT 1500 ON 5 APRIL 1945, VICEADM SEIICHI ITO, Commander of the Japanese First Diversion Attack Force, was relaxing in his comfortable cabin aboard the battleship *Yamato* when suddenly his Flag Secretary knocked on the door and entered.

'Sir," said the Flag Secretary, standing at attention, have an urgent dispatch for the Admiral."

'So?" hissed the Admiral, sucking in his breath and blinking his eyes. "From Adm Toyoda, then?"

"Yes, sir," replied the Flag Secretary seriously. "From the Commander-in-Chief of the Combined Fleet."

By Bertram Vogel



Adm Toyoda gambled with remnants of Japan's once proud Navy and lost the Yamato to U. S. air power.

The Admiral stretched his short legs and sighed. "So at last it has come," he mused aloud. "All right, then. Give it to me."

The Flag Secretary handed the piece of paper to the Admiral and stepped back smartly.

After scanning the message briefly, but without haste, the Admiral stroked a few cursory characters on a small white pad and looked up at his aide.

"So Toyoda has decided to gamble, eh? The last of our surface force against the enemy's ships, eh?" He grinned and stood up. "File the dispatch carefully," he told the Flag Secretary, hissing deliberately for effect. "One way or the other it will make history."

At 1520 on the following day, 6 April, Adm Ito stood alone on the Yamato's bridge and watched his surface force of ten ships steam into formation and leave Tokuyama. Because of the great danger of American mines in the Bungo Suido, the Admiral had ordered six of his eight destroyers to lead the way, and he observed now with grim satisfaction that it was the auspicious Isokaze, the "shore wind," which had been sent out ahead. The Yamato herself was immediately preceded by the destroyers Yukikaze, "snow wind," and Fuyutsuki, "winter moon," and by the light cruiser Yahagi, "the arrowmaker." She was followed in turn by the destroyers Hatsushimo and Suzutsuki, the "first frost of the year" and "cool moon," respectively.

Although it was an exceedingly poetic group that he

commanded, Adm Ito was actually far from satisfied with it. Besides, he was in no mood for poetry. This was, he knew, Japan's dying naval gasp, with the final death rattle itself to take place off Okinawa at dawn on 8 April. It wasn't that, however, which perturbed him, for he himself didn't expect to outlive his fleet. Like most Japanese, he was a fatalist, and he had been prepared for Adm Toyoda's death order long before it had actually arrived. Obviously there was no point in keeping the last units of the Japanese Navy in port, where ultimately they would be battered into pulp by B-29s and carrier-based aircraft. At least at sea the ships had a chance. No, the Admiral was in agreement with Toyoda's strategy; it was with the latter's manner of executing it that he found fault.

For one thing, his air protection consisted of only five planes, and for another he had been bitterly disappointed in the very limited cruiser strength which had been made available to him. The fact that Adm Toyoda had found it almost impossible to obtain even the 2,500 tons of fuel oil necessary for the ten ships at hand did not appease him but merely increased his wrath. American mines and submarines had cut off Japan's vital oil supply—had deprived him of his last opportunity to retaliate with maximum force. He was consumed with a violent rage at the thought of the still-intact vessels which had been forced to remain idly at anchor behind.

Nevertheless Adm Ito was confident that his "Yamato Force" would give a good account of itself. For if the force was limited in its number of capital ships and in its air support, it did at least have the powerful and modern Yamato, the largest battleship afloat. Following the awed gaping of the nearby fishermen and minesweepers, the Admiral let his gaze rest on the ship's huge triple guns-incredible and secret 18-inchers. Except for her brief and inglorious appearance in the Philippine Campaign during October, 1944, when she had sustained four bomb hits, she had been held in ignominious reserve. Well, the Admiral thought as he pounded fist against palm, this last time it would be different. He had made that vow before the portrait of the Emperor, and he wondered now which mighty units of the American fleet the dreaded Yamato would take down to the deep

WHEN, AT 1620, his special submarine patrol of three destroyers swung out wide and turned back toward Tokuyama, the grim Admiral was compelled to laugh in spite of himself. He recalled an old Japanese proverb: "Bushi wa shoku wa nedo taka yōji" — "the samurai glories in honorable poverty." He looked up at his pitiful escort of five planes and laughed again. Whatever the proverb said, the Admiral found no glory in his military poverty.

The basic plan formulated by Adms Toyoda and Ito

was simple. The Yamato Force was to proceed through the Bungo Suido south of Kyushu, pass through the Osumi Strait early on the morning of 7 April, and approach Okinawa from a northwesterly direction in the East China Sea. Then, at dawn on 8 April, Adm Ito was to open fire on American surface forces in the vicinity of Okinawa. The Admiral's air support was to consist entirely of land-based bombers and kamikaze planes.

That the operation would be no easy task, of course, was apparent to the Japanese. But at 1645 on 6 April—less than two hours after the force's departure from Tokuyama—Adm Ito perceived still another fact: that even the problem of arriving at Okinawa was one which would tax his ingenuity and his luck to the limit. For at 1645 the Admiral's Second Destroyer Squadron reported sighting a lone B-29, and at 1710 a float reconnaissance plane from the Saeki Air Group detected what seemed to be an enemy submarine.

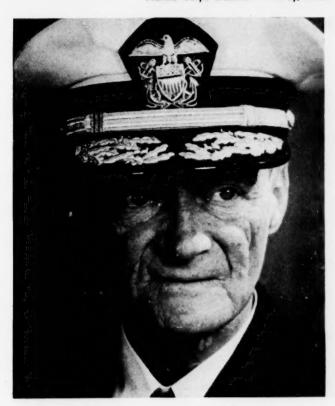
The "enemy submarine" was in reality two American submarines of Task Force 17, the *Threadfin* and the *Hackleback*, which had sighted the Yamato Force at 1700. Adm Ito had no way of knowing it at the time, of course, but the two American submarines were quickly given their instructions. The Japanese striking force was to be lured farther south. There Adm Spruance's Fifth Fleet task forces would give it the warmest possible welcome.

As the American forces made their preparations, Adm Ito's ten confident ships steamed ahead. At 2000 they negotiated the Bungo Suido, and Adm Ito, still alone on his bridge, now ordered a change in course to 140° at a point bearing 140° and two and one-half miles distant from the southern tip of Fukushima. A zig-zag maneuver pattern at 22 knots was put into effect, and the Yamato dropped back to the rear of the force.

By 0300 the striking force, still making 22 knots, had passed through the Osumi Strait and had changed course to 220°. Three-quarters of an hour later a further change was made to course 280°—practically due west—and Adm Ito, now feeling more secure, went below for a few hours of rest.

At 0600 on 7 April, Adm Ito was on the Yamato's bridge again, and now, in preparation for the possibility of aerial attack, he ordered that the number three alert cruising disposition be assumed. The Yahagi, the Admiral's one light cruiser, took up the Isokaze's lead position, and ringed around the Yamato at 40° intervals were the Isokaze, Hamakaze, Yukikaze, and Fuyutsuki to starboard, and the Asashimo, Kasumi, Hatsushimo, and Suzutsuki to port. The Yamato herself sent one plane aloft for antisubmarine patrol.

But if the cruise had been uneventful until then, at 0657 the Japanese experienced the first of the calamities that were to befall them before the sun had set. For at



Adm Mitscher's Task Force 58 sent out planes to sink the last hope of Adm Toyoda and the Jap Navy.

that moment the destroyer Asashimo—"morning frost"—encountered engine trouble and was forced to fall behind. The Yamato's captain, in quiet conversation with the Admiral, found him considerably distressed and sullen.

At 0830, fifteen minutes after the Yahagi had dispatched his first plane, came the excited report that American carrier' sed aircraft had been sighted approaching in attack formation, and ten minutes later the Yamato herself sighted seven F6F Hellcats. But as the fleet spread out, the Hellcats merely circled it once disdainfully and soared away without attacking.

Adm Ito understood the significance of the contact clearly. The worst was soon to come.

Ш

HAD THE JAPANESE FORCE been proceeding southward rather than westward at that point, Adm Ito would undoubtedly have been permitted to keep the bait a bit longer and to forge ahead unmolested. His trek to the west, however, made it appear as if he were intent upon deliberately fleeing from the Okinawa area, and for that reason the fast carrier forces of Adm Mitscher's Task Force 58 were ordered to intercept and to attack the Japanese units. Accordingly, on the basis of reports by an Essex scout plane, an American tracking and covering force of 16 fighters was launched at 0915, and at 1000 additional fighter planes from two task groups were

ordered into the air. At the same time Adm Ito's five plane escorts, having gone as far as they could, circled the ships below twice and headed back toward Japan.

At 1014 the Yamato sighted two enemy flying boats at 230°, and immediately wheeling to starboard, opened fire at them. For exactly sixty seconds every gun aboard the Yamato—even the nine 18-inchers—blazed forth, but to no avail. The two flying boats, climbing steadily out of range, disappeared in the heavy clouds.

For the next forty-five minutes Adm Ito kept his fleet busy maneuvering at sea. At 1020 he ordered a simultaneous turn to 230° , at 1045 a simultaneous turn to 160° , and at 1057 another simultaneous turn to 210° . Speed was maintained at 20 knots.

At 1110 the Yamato sighted a plane bearing 180° at three miles, and four minutes later one of the destroyers reported the presence of eight Hellcats. The Yamato and the Yahagi opened directional fire, but after it had proved completely ineffectual Adm Ito once again ordered a series of simultaneous turns and speed was stepped up to 24 knots.

At 1129 the fleet turned to 205°, and at 22 knots, headed on its scheduled course. At 1140 the Commander of the Japanese Second Destroyer Squadron noted optimistically in his battle report that "Air attack is expected but because of the cloudy weather and the state of the enemy the number of planes is not expected to be large."

The state of the enemy? Once again the little Nipponese were merely indulging in their favorite national sport—kidding themselves. But if the weather during the early part of the morning had been bad, and if the Japanese had relied upon the low, overhanging clouds to shield them against air attack, shortly before noon—and almost simultaneously with the arrival of eight Corsairs and 16 Hellcats—the ceiling of fog lifted and large clear patches of blue could be seen in the sky. The wind, from the west, was moderately gentle, and it was suddenly obvious to the Japanese that the American attackers were not to be staved off by the elements.

The Asashimo, which had fallen behind earlier in the day, was the first to be attacked. At 1210 she experienced a first thrust. Eleven minutes later she reported sighting 30 planes—and was never heard from or seen again. The main Japanese force took its own pounding from 1232 on. At that time 150 American planes, chiefly Hellcats, Corsairs, and Helldivers, roared in toward the gigantic Yamato. In an effort to meet the challenge, Adm Ito ordered the fleet to cease zig-zagging and to commence evasive maneuvers at maximum battle speed. And in order to make evasive action more effective, the entire force turned into the wind to starboard.

The Yamato drew first blood at 1240 when her antiaircraft batteries ripped up a Helldiver on the way down. But within a minute she herself was struck near her after mast with two medium-sized bombs. Her after fire-control room was battered, and her number two auxiliary gun and number thirteen radar were damaged.

But this was only the beginning, for now began the Yamato's frantic attempts to ward off the simultaneous and unrelenting attacks of scores of planes sweeping in from all sides. Under the circumstances it was an impossible assignment. For even as the Yamato's guns boomed and roared, the ship herself was desperately attempting to dodge one torpedo track after another. It was too much, and at 1245 the Yamato took her first torpedo hit, forward to port.

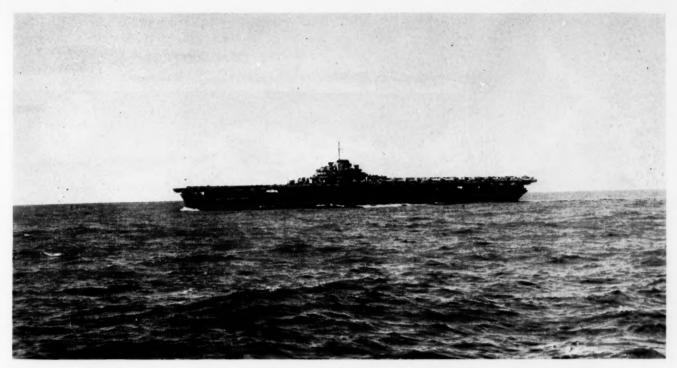
As the hurtling bombs whined down upon them, the ships themselves writhed in agony. Destroyers racing ahead at full speed suddenly turned to evade two, three, and four torpedoes streaking ominously toward them. Bows pitched and dipped into the sea, and huge quantities of white foaming spray thudded against bulkheads and superstructures which quivered and vibrated with the intensity of the ships' own momentum. The *Hamakaze*, hit by only one bomb at 1245, suddenly found navigation impossible, and the *Yahagi*, enveloped in her own smoke screen, seemed uncertain of her direction.

While the *Hamakaze* floundered, a fresh wave of torpedo-bombers swooped down upon her like screaming hawks. In an instant there was a blinding flash, then tremendous bursts of flame. And within a single minute her hull, cracking and creaking in anguish, tore itself viciously apart as wild-eyed men crazed with fear and panic hurled themselves headlong into the unfriendly sea.

The Fuyutsuki, fortunate because the two rocket bombs which struck her proved to be duds, turned in time to see the Yamato smashed anew by three torpedoes and two bombs. But her skipper had hardly congratulated himself on his good fortune when a single furious torpedo passed through his destroyer's bottom. And at 1308, three minutes later, the Suzutsuki, no longer the "cool moon," blazed as the result of a deadly bomb hit.

By Now the careful Japanese formation had been almost completely routed, but still the Helldivers, Corsairs, and Hellcats—ultimately to total 386 in number—continued to torment the bewildered and frenzied Japanese. The Kasumi, swinging around to escape one bomb, was hit solidly by two others, then discovered that a near-hit had suddenly made it impossible for her to navigate. And as her men swarmed over her decks to combat flame and smoke, they saw another sudden flash on the Yamato.

The Yamato, fighting off wave after wave of pursuing planes, braced itself at 1333 for 20 torpedo-bombers coming in at 60° to port. At 1334 she sighted six torpedo tracks bearing 50° to port at a distance of 2200 yards. But her best efforts were in vain, and three min-



A scout plane from the carrier Essex was the first to sight the Japanese battleship. Fighters, torpedo bombers, and dive bombers ended her unhappy career with a loss of only five planes.

utes later she rocked violently under the impact of three torpedo hits amidships. Listing to port, she turned to starboard—in time to sight four more torpedo tracks and to bring down one torpedo plane 600 yards off her bow. But no sooner had she done so than she herself was pounded on her port side by two more torpedoes.

Now, the attacking planes, with their chief prey hard pressed, divided their forces and descended upon the Yahagi and the Isokaze in earnest. Within five minutes the former had been blasted by two hits and was out of control, and by 1356 the latter, stunned by a near-hit, was taking in water. The Fuyutsuki, intent upon her self-assigned mission of rescuing survivors from the sea, was ploughing up the water toward the Yahagi when a new formation of dive-bombers chased her away. The Yahagi, absorbing almost incredible punishment for her age and weight, took a total of twelve direct bomb hits and seven torpedoes, then pointed her bow skyward and yielded to the impatient waves that rolled eagerly over her.

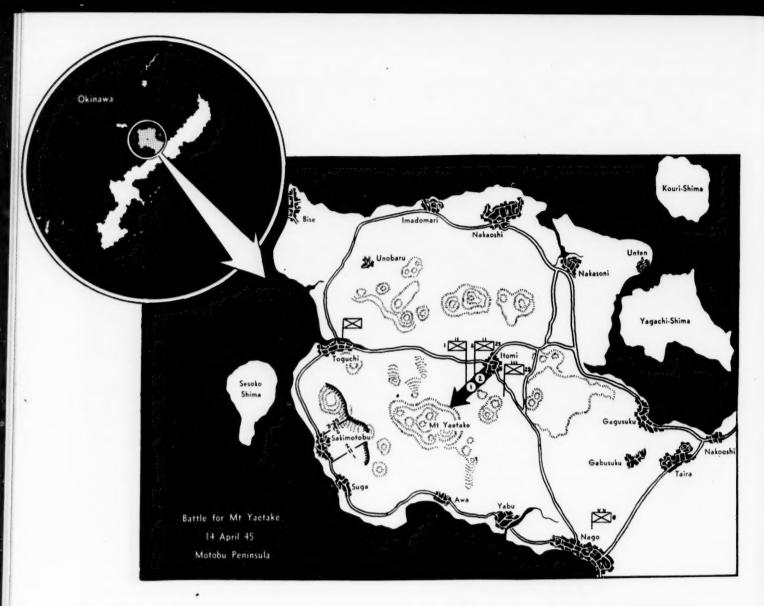
The Yamato, which in the meantime had made a turn to starboard, suddenly was unable to swing to again and was forced to proceed aimlessly on a reversed course. For her, as for most of the others, the end was at hand, but she managed to take yet more and more bomb and torpedo hits—to port and to starboard, forward and aft and amidships. But at 1417, twelve minutes after the Yahagi had gone down, a final torpedo struck her to port amidships, and by 1420 she was listing 20° to port. Three minutes later, with a tremendous roar and a terrific burst of multicolored flame, her forward and after turrets

hurtled high into the air and her hull turned halfway over as she slid beneath the waves. For the *Yamato*—and for Adm Ito—the war had ended. Her toll of the enemy, far less than her hapless Admiral had anticipated, was a mere five planes shot down.

At 1440 the American attacking force, with only four dive-bombers, three torpedo-bombers, and three fighter planes missing from its ranks, turned homeward, and the *Hatsushimo* and *Yukikaze* began the weary task of rescuing survivors. Two PBM Mariners flew in for American personnel, and although the angry *Fuyutsuki* fired ceaselessly at them, her marksmanship was no better than it had been during the battle itself. Less than two hours later the *Kasumi*, whose men had fought the inferno aboard their ship for three full hours, also sank.

The task of rescuing survivors was finally completed by the Japanese early that evening, and there remained only the task of scuttling the immobile and wrecked *Isokaze*. It was a hard task for men who had watched her as she had led Adm Ito's force out of Tokuyama only the day before.

Of the ten ships in the original Japanese striking force, only four destroyers—Fuyutsuki, Hatsushimo, Yukikaze, and the burning Suzutsuki—escaped disaster. All four, hard pressed by a handful of pursuing American planes, staggered home safely to Sasebo. But even then there was no real escape. For the Suzutsuki, heavily battered, was never of any use again, and the Hatsushimo, the "first frost of the year," was sunk by an American mine off Maizuru during a heat wave in July.



Marines in the Pacific War

Chapter 23

THE CONQUEST OF THE NORTH; MORE KAMIKAZE

By Fletcher Pratt

FIT HAD BEEN INTENDED THAT THE 6TH DIVISION should push north along the main bulk of Okinawa to the point where Motobu Peninsula juts northwestward, there securing artillery positions from which an attack on that

mass could be supported. The 2d Marine Division would then land somewhere near the base of the peninsula and

clear it out. Three considerations interfered with this arrangement. The 6th had not yet sealed off the base of Motobu when the big drive of the Kamikaze pointed out the danger of keeping troops afloat (already on 3 April three transports bearing part of the 77th Division had been hit with the loss of a lot of equipment and one regi-

mental staff nearly wiped out.) The 6th itself had met far less opposition and had received far fewer casualties than expected. The country was so nearly roadless that it was doubtful whether the communications net would

bear the weight of supporting two divisions in the north, which is to say that the Army did not want the 2d Divi-

sion ashore any more than the Navy wanted it on the water.

Accordingly on 9 April the 2d Division was ordered back to Saipan to lie there in distant reserve and Gen Shepherd's troops of the 6th were ordered to finish off Motobu by themselves. Only the number of this division was new; we have met most of the troops before, its three infantry regiments being the 4th, made up of the old Raiders, the 22d, which had been at Eniwetok and Guam, and the 29th, of which part had done time on Mt Tapotchau at Saipan.

The commander of the Peninsula was Col Takehiko Udo, nominally head of one of the infantry regiments of the 44th Independent Mixed. He had sited the best of his defenses to bear outward against a landing from the direction of Ie Shima. He had a fairly strong group of Okinawan home guards and had organized them to conduct a guerilla war among the ridges of the north, some in uniform, some without. The four midget submarines remaining at their base at Unten Ko he blew up; there seems to have been no fuel for them.

His defenses were concentrated on the 1400-foot hill mass occupying the southern half of the peninsula (which is about as large as all Saipan) known as Mt Yaetake. They were of the type designed by Gen Cho, with a command post very deep in, and one important addition not found in the south—corrals for horses, of which the Udo force possessed a considerable number, the best of all means of movement in that rough, rugged country. Yaetake is made up of a series of upthrust coral ridges, rising one above another to a pair of peaks. Just north of it a stream runs to the western shore to a place called Toguchi, with a small town, Itomi, near the headwaters of the stream and in shadow of Yaetake. Beyond Itomi and the stream another set of ridges occupies the northern part of the peninsula, curving slightly to the north at its center, so that a view from the stratosphere might show the general form of the mountains as a circle of a vast crater, with only the one break at Toguchi. It is heavily wooded with a species of pine; toward the main body of Okinawa a region of rice paddies runs down to the town of Nago, where there is an unimportant harbor.

Neither the dispositions nor the strength of the Japs were known when the 6th pushed past Nago on 8 April, and not even the geography of the Peninsula was known; nearly all of it had lain under cloud when the photos were taken from which our maps were made. Gen Shepherd planned to push tank-infantry groups of the 22d Regiment up the western side of the main island to its tip, making short patrols inland; to bring the 4th similarly along the east coast, and with the 29th to wheel left against the hill-mass of Motobu. The division reconnaissance company would feel around the edges of the peninsula to locate the main Jap concentration. The road situation was so bad that LSTs and amphtracs cruised along the shore to land supplies at every likely inlet. After Nago was taken it became a main base point.

The plan for the 29th was the 3d Battalion to circle the south coast of the peninsula to Toguchi, while the 2d Battalion moved north along the coast road to reach the



MajGen Lemuel C. Shepherd, CG, 6th Division, had the clever Jap Col Takehiko Udo as an opponent.

northwest cape and the 1st Battalion waited in reserve near the center. The Reconnaissance Company had been along the 3d Battalion's road and found it clear except for mines, broken bridges, and gaps dug in the road where it circled the cliffs, that forced the company to leave its vehicles behind. The open character of the road was in fact an error; Col Udo's men had seen the scouts all the time, guessed what they were there for and held their fire till bigger game came along.

By 8 April the 3d Battalion had discovered that there were Japs in Yaetake; next night as it lay in bivouac around the deserted hamlet of Awa, heavy gunfire began to come down from the hills, but ceased when American artillery in the rear took up counterbattery. On the 10th the battalion reached Toguchi in a pouring rain and tried to push into the hills eastward but was driven back by fire from the heights above whose exact source could not even be made out.

THE DISCOVERY OF JAPS in the Yaetake mass brought the 1st Battalion, 29th, forward to Itomi on 9 April, with the tanks left behind because the bridges were all out, the road breached and covered with felled trees. The battalion encountered numerous little ambushes. Next day the two battalions tried to connect up via the Itomi-Toguchi road and stream valley, but the effort failed when both battalions encountered fields of fire from above to

which they could not even reply, and against which our artillery could give no help, since the guns had to shoot across a high hill mass toward our own troops. Another attempt to accomplish the same result, with a covering attack moving out of Toguchi into the hills, broke down under a vigorous counterattack on 12 April.

The estimate of Japanese strength at this time was 1500 men, which we now know was far too low, but Gen Shepherd had a good picture of the character of the enemy he was facing and of the positions he occupied. Udo was in the Yaetake oval, with a few elements north of the Toguchi-Itomi road, exceedingly well supplied with mortars and automatic weapons, and he was a clever officer, making a passive defense, using his small force to pin down a much greater one, conduct guerilla operations, complicate our supply problem and hold ships in the offing for the Kamikaze to grind down. (Unless this matter of the Kamikaze be constantly kept in mind there is no understanding the Okinawa campaign.) The character of the country was such that tanks were almost useless. Our own guns could fire only from long range; when they tried to come forward under the loom of the hills, Udo opened counterfires, and on 13 April, thus knocked out one gun and blew up an ammunition dump. The Japs thoroughly knew the trails, with which knowledge, their interior lines and high points of observation, they were able to move forces to meet ours at any point.

For this type of guerrilla war the positions and arrangements had only a single defect—there was no area to which the defenders could escape, their only hideout was also the place where they had to fight. At a conference on 12 April Gen Shepherd decided to exploit this weakness by an offensive which may be described as one of compression. A battalion of armored amphtracs was brought round by sea to Toguchi to give the battalion there some gunnery support. Two battalions of the 4th Regiment came over from the east coast of the island and worked round the southern shore of Motubu to hook up with 3/29 for an attack eastward toward the first of the rising ridges, while the other two battalions of Col Victor F. Bleasdale's 29th Regiment were to move along the Itomi-Toguchi road, swing a little left into the ridges south of it, touch the Toguchi battalions and drive the enemy into a narrowing V.

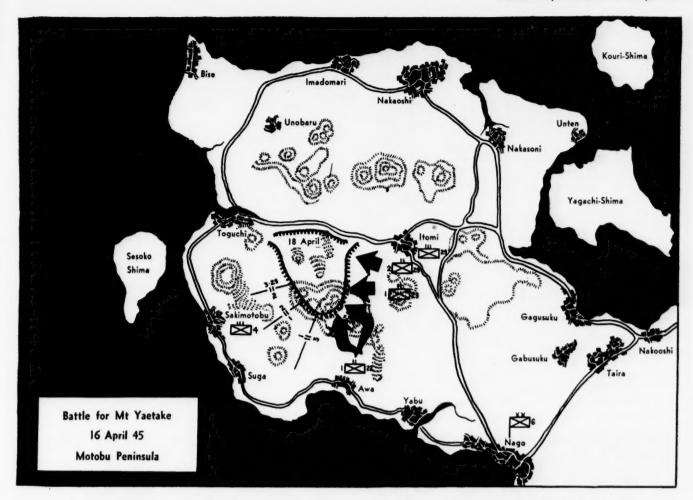
The attack was for the 14th; air support, artillery and naval gunfire on call. The 4th Regiment crossed one ridge line before noon without opposition. As they tackled the next rise they began to run into small groups of machine gunners and riflemen beautifully disposed in pillbox and cave, supported by machine cannon and with observation on every move our men made. Nevertheless the drive went forward. By evening the 4th had gained its objective line and was ensconced facing a deep valley. All would have been well had the 29th made similar pro-

gress, but it had gained little and that little off direction, to the southwest, with casualties the heaviest of any day's fighting in the campaign. That night Gen Shepherd replaced the 29th's commander with Col William J. Whaling, the scout-sniper of Guadalcanal, who should be a good man among the continual ambushes of this mountain war.

For the following day the 29th was to cease trying to work along the Itomi-Toguchi road, attacking southwest against the back slopes of Yaetake, while the 4th, with its attached battalion of 29, moved against the summit of an eminence called Green Hill, just overlooked by the main Yaetake peak. 3/29 would move directly against Green Hill; one battalion of the 4th sliding rightward to get around another crest, Hill 200, while the other assaulted it in front. The fighting that day was as hard as any in the campaign and 3/29 stalled before Green Hill, where the Japs could fire on them from reverse slopes, but the two battalions of the 4th gained the commanding ridge to the south of it and that night the Japs abandoned Green Hill. Gen Shepherd sent the remaining battalion of the 4th up from Awa. The line was now a very deep horseshoe, with the Yaetake crest in its center. Down underneath them the men of 3/29 could hear muffled explosions all night as Japs who had not been able to retreat from the caves blew themselves up with grenades.

On 16 April 3/29 held position on Green Hill, while two battalions of the 4th went right up the main summit of Yaetake, across a slope of bare rock with mortar shells bursting on it, and gained the crest by twilight. The company up there had water but no food, was getting fire from several directions and was forced to beat off a counterattack under the fading light, but it held. On the front of the 29th the advance went forward more slowly: there were still a good many pockets among the ravines by night. But the Jap position was now really broken: communication between the command and its units was lost and Col Udo was trying to set up a new headquarters at Taira, north and east of the fighting area. One of his officers found him suffering from skin disease and quite weak. The remaining movements of the campaign have been described as the convulsions of a headless snake. but the figure is inaccurate; the fangs were still in the moving portion, and on 17 and 18 April (when Ernie Pyle was killed watching the 77th Division take Ie Shima) the 6th Division had casualties as heavy as any since they first began to encounter Udo.

STILL, IT WAS MOPUP. The 17th saw the two regiments moving northward together to the Itomi-Toguchi road, the next day they crossed it and pushed through the rugged hills to the north coast, which was reached on the 23d. The Marines had many strange encounters with groups of Japs organized and unorganized, found elaborate supply dumps in positions that might easily



have held a division. The cost of the conquest had been 970 casualties to us; of the enemy 2,014 were found dead, a figure which does not include those who blew themselves up in caves, yet even so, fails to account for all the defenders of Motobu. The fact is that when the 29th's attack of 14 April failed to gain the road line and squeeze all the enemy into Yaetake, the way was left open for a considerable number of them to filter out like Udo and make for the northern island, where he expected to conduct guerrilla operations.

These did not turn out very well because Udo had either forgotten or had been unable to provide for the first necessity of guerrillas—that is, food. Getting something to eat became an overmastering necessity, groups could not hold together and the American patrols kept after them. After two little fights, one on the 22d, when 100 of the enemy were killed, and one on the 26th, when 259 were knocked off, the whole affair sank to the level of beating out brigands who tried to get into our lines at night for a sample of "Roosevelt Rations."

It had been a well conducted little campaign, of a character as anomalous as anything in the larger operation which was made up of anomalies—mountain fighting by a force whose specialty was beach warfare. Some defects showed up in the process. The supply situation

was never good, for instance, the Marines simply not being equipped to carry food and ammunition into such country by any other means than on their backs. On the other hand, Marine drive again and again carried the men of the 6th to the crests of hills, which once gained, all the elaborate system of entrances and exits only resulted in the enemy providing our riflemen with live targets; and every Japanese who survived remarked on the paralysing violence of the Marine mortar fire.

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MIMEOGRAPHED SHEET prepared at Col Udo's headquarters for distribution to American troops:

NEWS OF NEWS
No. I
Saturday, April 14
PRESIDENT ROOSEVELT DIED A SUDDEN
DEATH

To the men of the 6th Marine Division!
We take it a great honor to speak to you for the first time.

We are awfully sorry to learn from the U. P. telegraph that the life of President Roosevelt has suddenly come to its end at 3:30 P. M. on April 12. It seems to be an incredible story in spite of its actual evidence.

Men of the 6th Marine Division, particularly men of the 15th and 29th Marines and the 3rd Amphibious Corps, we express our hearty regret with you all over the death of the late President. What do you think was the true cause of the late President's death? A miserable defeat experienced by the U. S. forces in the sea around the island of Okinawa! Were this not the direct cause leading him to death, we could be quite relieved.

We do not think that the majority of you have exact knowledge of the present operations being carried out by the U. S. forces although a very few member of you must have got a glympse of the accurate situation.

An exceedingly great number of picked aircrafts carriers, battleships, cruisers and destroyers held on her course to and near the sea of Okinawa in order to protect you and carry out operations in concert with you. The 90% of them have already been sunk and destroyed by Japanese Special Fighting Bodies, sea and air. In this way a grand "U. S. Sea Bottom Fleet" numbering 500 has been brought into existence around this little island.

Once you have seen a "Lizard" twitching about with its tail cut off, we suppose this state of lizard is likened to you. Even a drop of blood can be never expected from its own heart. As a result an apopletic stroke comes to attack.

It is a sort of vice however to presure upon others unhappiness. This is why we want to write nothing further.

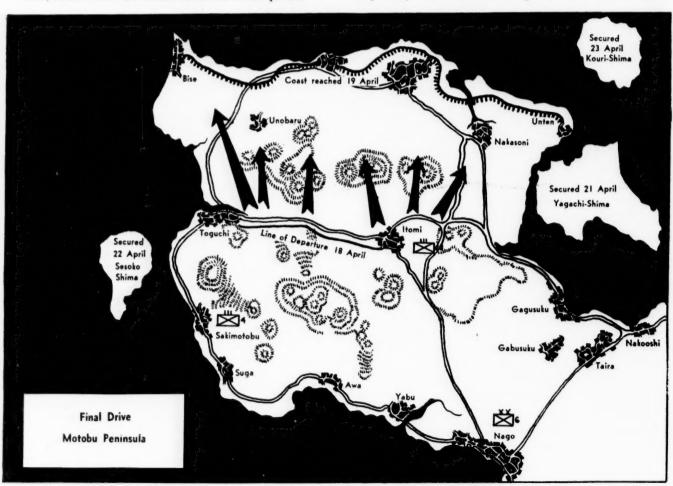
It is time now for you, sagacious and pradent, however, to look over the whole situations of the present war and try to catch a chance for reflection!!

ARMY INFORMATION BUREAU OKINAWA

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THE MORNING of 11 April an increase in the number of snoopers around Fifth Fleet and the fact that it had been several days since the Kyushu fields had a real going over, indicated another big Kamikaze drive. The normal daily support missions over Okinawa were dropped for the day and the fleet maneuvered at large. flying extra combat patrols. Toward noon they began to come in, a few at first, dropping "window" to confuse our radar, then building up gradually, with heavy fighter cover. One just grazed Enterprise, the plane's bomb going off under the ship, with so much mining effect that the old veteran carrier had to return to dock; the destroyer Kidd was similarly mined by another near miss and four more Kamikaze did some slight damage to Essex, Missouri, and the destroyers Hank and Hale. 29 were shot down; as night drew in more Kamikaze appeared, of which 18 were shot down in the Task Force.

It seems that Adm Ugaki had had some difficulty mounting this attack, which was intended to fall simultaneously upon the fleet and the Okinawa anchorages. He had restorted to wide dispersion in Kyushu in order to keep away from our carrier plane and B-29 counter-





Marines move up on Okinawa as spotty resistance by the Japanese garrison enables Leathernecks to reach the northern tip of the island. In the south the enemy staged a fight to the finish.

strokes, and this produced the result of so complicating the problem of fueling and arming the planes that not all the Special Attack units could leave together. It was accordingly the morning of the 12th before the remainder of the Kamikaze and 60 Tokobetsu of the Army force could shift the point of attack to Okinawa. There were a number of normal bombers in the sky, so the total force counted 165 suiciders with nearly as many of other types. They hit the picket line and fire support group hard. The battleships Idaho, Tennessee, and New Mexico, destroyers Cassin Young, Purdee, Sigsbee, Stanly, Zellars, minesweepers Jeffers and Lindsey, LCS 57, destroyer escorts Whitehurst and Riddle, all took suiciders aboard with damages described as major, which means that except in the case of battleships, they had to go home and be practically rebuilt. Approaching the destroyer M. L. Abele a bomber launched from its underbody something like a winged torpedo which shot at the ship with a stream of smoke coming from its tail. It hit her amidships and blew up with a terrific explosion, breaking Abele's back so that she sank at once. Two of the LCS gunboats were sunk by Kamikazes, the minesweep Gladiator and destroyer escort S. S. Miles were hurt, but less seriously. Normal bombers got hits on the cruiser Oakland, the destroyer escort Wann, and the destroyers Brush, Conklin, D. W. Cummings, and Norman Scott, but all these repaired their damage on station.

The failure of the Okinawa attack to coordinate with that against our fleet permitted heavy air patrols over the anchorage; 154 Jap planes were shot down. The thing that hit *Abele* was soon identified as a rocket-propelled winged bomb with a suicide rider; one was captured intact on Okinawa. It moved so fast as to be a singularly poor target for gunfire, but also so fast that the operator had only the slightest control and a well-handled ship could easily dodge; only one or two ships were hit after the first. The weight of the apparatus made its parent plane cold turkey for a fighter. Our people tagged the device, with a word borrowed from the Japs themselves, as the "baka"—foolishness bomb.

All scouting reports showed an amount of movement on the Japanese fields which indicated that this attack was only a first wave. Spruance took the fleet north again and on the 15th launched a heavy fighter sweep against Kyushu. It knocked down 29 airborne planes and the flyers claimed 51 grounded. The fighter sweep continued next morning, when 17 more Jap planes were shot down and another 54 destroyed on the ground, but that day Ugaki got his Special attack units away and this time really attacked both fleet and anchorage simultaneously. There were 155 Kamikaze and Tokobetsu together in the drive; they badly hurt the destroyer escort Bowers, the destroyers Bryant and Laffey, fast minesweepers Harding and Hobson, two LCS gunboats and the oiler Taluga. The destroyer Pringle was sunk; the big carrier Intrepid got one through her flight deck that abolished everything in the hangar, smashed one of the elevators and dished out the flight deck itself. She had to go home, but the Task Force considered the day a comparative success, having shot down 155 planes and destroyed 55 more on the ground. The land based fighters from Yontan got 38 more. To be continued

In Brief

A Naval Scholarship honoring Gen Alexander A. Vandegrift, 18th Commandant of the Marine Corps, has been established at Rice Institute, Houston, Texas, for young men of outstanding ability. The scholarship was one of seven set up by Houston Endowment Incorporated, the philanthropic corporation established by Jesse H. Jones, millionaire and former Secretary of Commerce, and Mrs Jones. Scholarships honoring Gens Eisenhower, MacArthur, and Patton and Adms King, Nimitz, and Halsey have been set up at other schools.

The Army has established a broad program for training selected military personnel in foreign languages, to produce qualified linguists and area specialists to meet demands of occupation duties, military missions, and foreign liaison. Training will be given in Russian, Japanese, Chinese, Turkish, Greek, Persian, Arabic, Korean, Spanish, Portugese, and French.

A patent has been issued by the United States Patent Office on the Norden bombsight, the carefully guarded secret of the Navy for more than fifteen years. The patent was finally granted on an application filed by Carl L. Norden and Theodore H. Barth seventeen years ago, but the bombsight still remains the property of the government.

A new Navy rocket has spurted seventy-eight miles into the sky and hit a speed of 3,000 miles an hour, the Army and Navy said recently. This is the highest and fastest an American missile is disclosed to have gone. The wartime German V-2 reached 114 miles and about 3,500 miles an hour in tests at White Sands, N. M.

An unusual project of the Engineer Corps is a long-range plan of comprehensive investigation of the permanently frozen ground of the far North. A research area near Fairbanks, Alaska, includes tests of runway pavements and building designs with precise equipment installed for careful observations under Arctic and Subarctic conditions.

Navy Secretary John L. Sullivan has approved a new sleeve insignia for officers in the Medical Service Corps. It may be worn as soon as it becomes available. The insignia resembles a spread oak leaf embroidered in gold, a stem curving slightly to the front with a twig below the stem and attached thereto.

A new type of periscope camera for use by U. S. submarines was disclosed recently by Eastman Kodak Company. It is stated that the camera can take close-up beachhead pictures at a speed of better than one per second. It is also reported that the company has supplied the Navy's underseas force with a device by which a sheet of film from the new camera can be processed in daylight in less than 60 seconds.

The Navy has a stand-by air force of 120,700 men, including more than 42,000 pilots, the Naval Reserve office announced recently. The Naval reserve program for keeping combat-trained pilots and crewmen in a state of preparedness for emergency duty is being carried out at 23 naval air stations throughout the country.

The History of Marine Corps Aviation in World War II will be written by Robert Sherrod, famed war correspondent and author. In order that material which might be of value not be overlooked, the Marine Aviation History Board, Room 4928, Navy Dept., Washington 25, D. C., has requested that all members of the Armed Forces, or former members lend significant photographs and documents to the Board. All material will be returned to owners upon completion of the history.

The report of the *Joint Congressional Air Policy Board* suggests that provisions be made to allow naval aviators to transfer to the Air Force. Such a change is said to offer better opportunity for useful service and advancement. The Air Force has an officer shortage in the 43 to 53 age group and the Navy could spare men in that group. In theory, both services and the pilots concerned would benefit.

The Navy claimed a record of 10,851 statute miles for regularly scheduled long-range direct radiophone transmissions from its mobile unit aboard the Burton Island, icebreaker and head-quarters ship of the Navy's antarctic expedition. The Burton Island maintains a daily schedule of photograph and weather-chart transmissions direct to Washington from its base of operations in the Davis Sea, off the western edge of the Shackleton Ice Shelf.

A new nylon parachute, larger, safer and more efficient than its predecessor, was ordered to replace the standard chute the Navy had been using for 25 years. Made of "rip-stop" nylon, a waffle-weave material sewn with heavy cross threads at quarter-inch intervals to help prevent tearing, the new chute is 28 feet in diameter, four feet larger than the old one. Tests showed that the new chute lessens opening shock, gives a slower rate of descent, hence gives added safety in high-speed bailouts.

The new, all-metal Consolidated-Vultee L-13 will be the lightest plane ever used by Air Rescue Service in its search and rescue operations for missing or crashed military or civilian aircraft in the United States. It cruises at 92 mph and, with a 46-gallon fuel tank, has a normal range of 368 miles, which can be increased to 750 miles by the addition of an auxiliary tank. This plane can be converted to an aerial ambulance with space for two litters, a medical attendant, and the pilot.

An atomic engine which would propel a submarine under water at 30 knots for a year without refueling is the goal of the Navy's nuclear power engineers. Navy officials said the development of an efficient atomic energy engine may require a minimum of five years of intensive work. The engine is still on the drawing boards, and it may be several years before an experimental model will be attempted, they said.

The Navy has modernized its system of ranking enlisted men. Dropped overboard are such ratings as coxswain, ship's cook, seaman, 1st class, and seaman, 2d class. The general revamping of the system will merge the present 198 ratings into 77 general service rates under 12 general categories.

Canine paratroopers are the Air Force's latest wrinkle for the rescue of plane crash victims from winter wilderness. The Air Transport Command in Labrador conducted a full-scale, and apparently successful, test of dropping dog rescue teams with a trainer and doctor. The dogs bail out in chutes that open automatically. Their trainer, who bails out first, is waiting for them when they land and the chute harness then serves as the dog-sled harness for the rescue work.

The Army has ordered a modification in the Munson shoe last, over which the soldier's service and combat footwear has been made since 1912. The "new look" in GI shoes will feature a flatter sole, providing better traction and greater wearing qualities. The improved shoe is expected to fit better, be more comfortable, and reduce the incidence of sore feet.

The Army Medical Department in cooperation with the Air Force is conducting Operation Wind-chill to determine what might happen to the physical well-being of soldiers suddenly transported from warm climates to extreme cold. Thirty-two Air Force crewmen, adjusted to Florida climatic conditions, were relocated in the subzero climate of a far north base to determine exactly what takes place in the bodies of men in the course of adjustment to extreme cold.

The Navy plans to keep 300 combat ships in active service during the coming fiscal year, the same number it is maintaining now. Next replacement will be the relief of the carrier Midway by the Philippine Sea. The Midway is to be altered extensively to accommodate larger, faster planes. Other alterations will probably include apparatus for launching rockets and perhaps guided missiles.

The period 4 May to 6 June has been selected as the period during which the Navy Relief Society will issue its annual call for contributions from all members of the Naval Service. The purpose of the Society is to assist either financially or with other services the officers and enlisted men of the regular Navy and Marine Corps, the reserve components thereof when on regular active duty, the dependents of such personnel as well as dependents of deceased personnel of the Naval Service.



The Air Force Today

DURING WORLD WAR II THE UNITED STATES DEveloped the world's mightiest air force: a strength of 2,400,000 men and 80,000 planes backed by an industry capable of producing 96,000 aircraft a year. By 1947 this gargantuan air force had dwindled to 337,000 men and 10,800 planes—and most of the planes were obsolescent. Seventeen new types of aircraft were delivered in 1947, but in most cases deliveries were confined to one or two experimental models. Only one was produced in quantity and that was the P-80B of which approximately 200 were delivered. Deliveries of the other 16 types totalled less than 40 planes.

Fortunately, we still have a large stockpile of World War II aircraft. Unfortunately, these are rapidly becoming obsolete and most models are no longer in production. In the event of a sudden emergency, the United States could, of course, set up stored tools and manufacture World War II planes in a short period of time.

But World War II planes are now second-rate planes.

It is estimated that America must replace 100 per cent of its aircraft every four and a half years to remain strong enough to defend this country against an aggressor nation. This indicates a yearly military plane production minimum of 5,000 aircraft.

As aircraft become more complicated, the time factor between initial design and operational use becomes increasingly greater. All the planes and engines used in World War II were at least on the drawing board before Pearl Harbor.

A major mission of the Air Force is the provision of strategic or long range air power. The backbone of our strategic bombing force remains the B-29. Even in this type plane, most of the 2,500-odd available are in dead storage. Three to six months would be required to put them in combat condition. Eventually our strategic striking force will be equipped with B-36s or similar planes capable of terrific bomb loads and tremendous ranges.

All photographs and performance figures used in this article were supplied by the Directorate of Public Information, Department of the Air Force.

Consolidated-Vultee B-36 is the world's largest land-based bomber. This plane has a wingspan of 230 feet and is 163 feet long. Pressurized forward and aft compartments are connected by an 85-foot tunnel through which moves a four-wheel trolley. Six Pratt and Whitney 28 cylinder, pusher-type engines develop a total of 18,000 horsepower. Its bomb bay has a volume equal to that of four railroad freight cars. Range and payload of this 300 mph aircraft are greater than any other Air Force bomber.

Boeing B-50 is the successor to the B-29 of World War II fame. It has the same dimensions as its predecessor except for a five foot addition in tail height. Aside from its external resemblance to the B-29, 75 per cent of the B-50 is new. It has a 59 per cent increase in power and is capable of longer ranges. Powered by four 3500 horsepower Pratt and Whitney Wasp Major engines, the B-50 cruises at 300 mph and has a top speed approaching 400 mph. It goes into service this spring.

Douglas XB-43 was the first U. S. bomber designed for jet engines. Powered by two TG 180 jets, the XB-43 has a service ceiling of over 38,000 feet and a range of better than 1,400 miles. It has a wing spread of 71 feet two inches and is 51 and one-half feet from nose to tail. It has a retractable tricycle landing gear and is equipped with a pressurized cabin. The jet engines are located within the fuselage in much the same manner as the inline engines of the B-42.

North American XB-45 is one of the first operational Air Force jet bombers. The plane has a wing span of $89\frac{1}{2}$ feet, is 74 feet $\frac{3}{4}$ inches long, and 25 feet high from the ground to tail top. Powered by four General Electric jet engines, arranged in pairs in single nacelles on each wing, it has a tricycle landing gear and pressurized cabins. The pilot and co-pilot operate tandem fashion in a plastic bubble on top of the fuselage, forward of the leading edge of the wing.

Consolidated-Vultee XB-46 is a four-jet bomber with a service radius of 800 miles and a top speed in excess of 480 mph. The XB-46 features an exceptionally long fuse-lage, 106 feet from nose to tail, only seven feet less than its wing span of 113 feet. Four TG-180 jet engines give the XB-46 a combat range of better than 800 miles. This ship recently completed its tests.





Northrop B-35 "Flying Wing" is another of the Air Force's long-range heavy bombers. The B-35 carries a crew of nine in the pressurized central nacelle. The pilot sits in the forward cockpit, offset to port, while the bombardier is on the starboard side, with the bombing window in the leading edge of the wing. Double-split flaps at wing tips provide the Flying Wing its directional control. The bomber is powered by four Pratt and Whitney Wasp Majors. The YB-49 is a jet-propelled version of the Northrop B-35 "Flying Wing." The "Wing" versions have successively increased from two to four conventional engines to eight jet engines.

Northrop YB-49 is a jet-propelled version of the B-35 Flying Wing. The Air Force's largest jet-propelled bomber is powered by eight General Electric J-35 jet engines with a combined thrust of 32,000 pounds. The YB-49 spans 172 feet across the wing, but is only 53 feet long due to the absence of the conventional fuselage. Crew capacity is 13 men, six of whom are in reserve for relief duty on long missions. The landing gear of the YB-49 is of the tricycle type, consisting of two main wheels, five feet six inches in diameter, and a single nose wheel, four feet eight inches in diameter.

Boeing XB-47, Stratojet, features sharply swept-back wings and tail surfaces. The ultra thin wings support six General Electric jet engines in double nacelles inboard and singly near the swept-back wing tips. Overall dimensions of the giant bomber are similar to those of the B-29 Superfortress. Wing span is approximately 116 feet and length is 108 feet. The unusual type landing gear is of the tandem type. The main wheels retract into fore and aft sections of the body, while outrigger wheels provide lateral stability during ground operations. Performance figures on the Stratojet have not been made available.

Mortin XB-48, another six-jet bomber, is powered with General Electric-Allison J-35 engines developing a total of 24,000 pounds of thrust, equal to power of two giant electric locomotives, each pulling 125 freight cars. It has a wing span of 108 feet, a length of 85 feet, and a height of 27 feet. Carrying a crew of three, the XB-48 has a bomb capacity exceeding 10 tons. The plane has a top speed of more than 480 mph and a combat radius of better than 800 miles. The bicycle type landing gear has a pair of wheels mounted tandem which retract into the fuselage. Small outrigger wheels outboard of engine nacelles are for balance on the ground and retract into the wing.



An all-jet fighter force is planned

A SECOND MAJOR MISSION of the Air Force is the provision of a tactical striking force to be employed in joint operations with ground and sea forces. The tactical air command includes fighter, bombardment, reconnaissance, and troop carrier groups.

Most spectacular feature of the tactical air force are the postwar fighter planes. As World War II closed, the Lockheed P-80 Shooting Star was almost ready for combat. This fighter was America's first production jet aircraft. It marked a new era in military aircraft.

With our stockpile of P-47s, P-38s, and P-51s relegated to a second-class aircraft status, the days of the propeller-driven fighter plane appear to be strictly numbered. Some of the present compromise models such as the North American P-82 may stick around a while longer.

Present experimental jet fighters vary from single jet units to twin and four jet engines giving speeds exceeding 600 mph. A great fund of technical know-how is being accumulated from these pilot models. However, production lags far behind. To date, only three fighters, the P-80. P-84, and P-86 are in production, and only the

P-80 is operational.

Most present U. S. jet fighters are limited to a short tactical operating radius. There is a need for fighters capable of accompanying long range bombers on their round trip to the target.

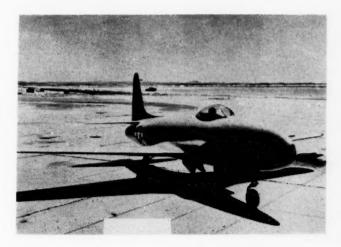
Interception of guided missiles and rockets is another theoretical task facing the jet fighters. The German V-1 buzz bomb with its top speed in the 400 mph class was relatively easily tracked and destroyed. Later model guided missiles, such as the rocket-powered German V-2 with its 3,400 mph velocity, present staggering problems to the interceptors.

Backed by recent legislation, the Air Force plans to build up an all jet tactical force that will be capable of meeting any emergency. New planes will be added as soon as they pass test flights and can be put into production. Student aviators will receive transition training in jet propelled planes before being designated pilots. The Air National Guard and the Air Reserve are very closely coordinated with the regular establishment and will also receive jet training and equipment.

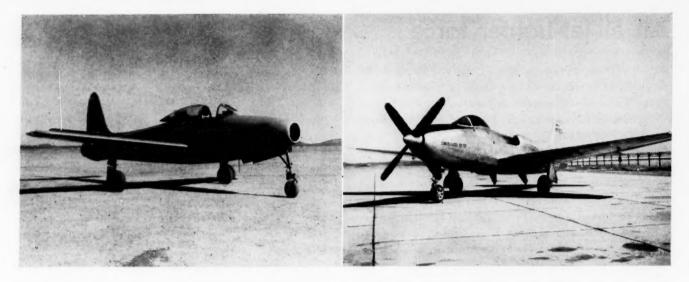
Our planes are the best in the world, but there aren't enough of them

Lockheed P-80, Shooting Star, jet fighters are powered with GE-Allison J-35 jet engines with water injection for increased take-off and climb performance. The only postwar plane in service with the Air Force in quantity, the current production model, the P-80B, has a top speed approaching 600 mph. At the present time the older P-80s are being revamped to give them most of the characteristics of the "B" model. Improvements include greater fire-power, greater resistance to battle damage, thicker skin, and strengthened bulkheads to provide a sturdier base for the plane's armament.

North American P-82, Twin Mustang, was constructed by joining two P-51 fuselages to a single wing. Powered by two 12-cylinder Allison (or Rolls Royce) engines of 2,200 horsepower each, the Twin Mustang has a top speed in excess of 475 mph and a combat range of approximately 2,500 miles. With a pilot in each cockpit and an automatic pilot in the main cockpit, it reduces to a minimum the problem of pilot fatigue on the long-range missions for which this plane was designed. In February, 1947, this plane flew 5,000 miles non-stop from Hawaii to New York in 14 hours, 33 minutes.







Republic P-84, Thunderjet, is one of the Air Force's three production jet fighters. Powered by a General Electric J-35 jet engine, the P-84 is in the 600 mph class. The air intake is in the nose of this jet fighter rather than on the sides. The Thunderjet has a range of over 1,000 miles. A pilot ejector seat for quick bail-out in case of emergency is featured in this fighter. The Air Force has ordered 600 XP-84s.

Curtiss XP-87 is a four-jet fighter powered by Westing-house engines. It has a wing spread of approximately 60 feet and an overall length of about 65 feet. Manned by a two-man crew, it is designed to operate under extreme weather conditions and will incorporate the latest development in anti-icing equipment. The ship is now at Muroc, Calif., Air Base for flight testing. It has completed its ground and taxi tests at the Columbus, Ohio,

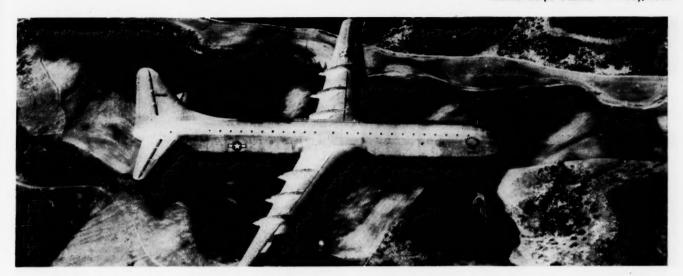
plant of the Curtiss-Wright Corporation.

Consolidated-Vultee XP-81 is a low-wing combination gas turbine and jet-propelled fighter in the 500 mph class. The plane has a wing span of 50 feet five inches, is 44 feet 10 inches in length and 14 feet high. Armament consists of six 50 caliber guns or six 20mm cannons. There is a J-33 jet unit in the rear fuselage for cruising power. This is one of Consolidated's few attempts at producing fighter type aircraft.

North American XP-86 is a single-place, low-wing fighter powered with a GE-Allison J-35 axial flow jet engine capable of producing 4,000 pounds of thrust. Designed for speeds exceeding 650 mph the XP-86 is the first operational fighter with swept back wings to fly in this country. The sweep back delays compressibility shock waves, enables the plane to reach higher speeds than those possible with the conventional wing. Slots slow landing speed of this fast plane to 100 mph.







TRANSPORT PLANES have both a tactical and a service mission. Their value as troop and cargo carriers was clearly demonstrated in the last war. Present designs seek to improve the range, speed, and load capacities attained in the World War II models. How well the designers have succeeded is indicated by the behemoth Consolidated-Vultee XC-99, transport version of the B-36, now being tested. Already in operation is the Boeing C-97 and an improved version of the Fairchild Packet, the C-119, is going into production. Development of military transports goes hand in hand with the development of commercial types and the Air Force benefits by the experience of air lines using the commercial version of military transports.

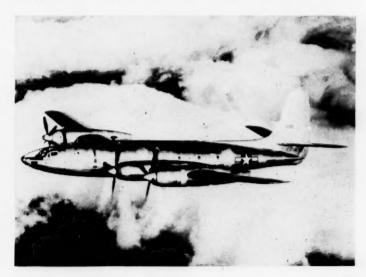
Present experimental models indicate that, for the foreseeable future, most transports will be powered by conventional reciprocating engines. Until the new models are produced in quantity, the dependables of the transConsolidated-Vultee XC-99, cargo version of the B-36, is the world's largest land plane. The giant XC-99 is designed for a top speed of more than 300 mph and a maximum range of more than 8,000 miles. Capable of carrying 400 fully-equipped combat troops, 335 litter patients with attendants, or 100,000 pounds of cargo, the XC-99 has the same wing span as its bomber counterpart (230 feet), but is 19 feet longer and 10 feet higher than the B-36, with a length of 182 feet and a height of 57 feet.

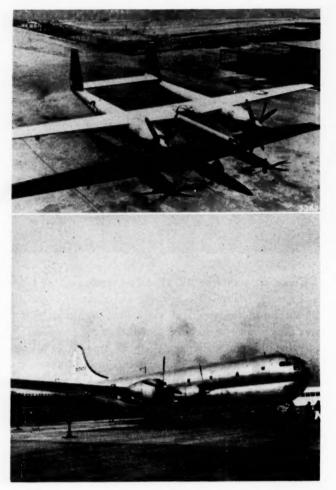
port service will continue to be the C-47s and C-54s of wartime fame.

The recent unification of the Army Transport Service (ATC) and the Navy Air Transport Service (NATS) promises a more efficient distribution of available aircraft and a more economical routing of scheduled flights.

Postwar transports presuppose airborne operations

Republic XF-12 is a flying laboratory for long-range observation and photographic missions, carrying a crew of seven. It is a military version of the Republic Rainbow transport plane. Both the XF-12 and Rainbow are powered by conventional Pratt and Whitney Wasp Major engines but utilize exhaust gases to obtain additional jet thrust assist, and both have top speeds of more than 450 mph. The XF-12 has a range of 7,500 miles and a service ceiling of better than 40,000 feet. Aerodynamically, the Rainbow is almost a counterpart of the XF-12, but is structurally a distinctly different airplane, capable of high altitude cruising speeds which range from 400 mph over 4,000 mile ranges up to 440 mph over 1,000 mile domestic routes.

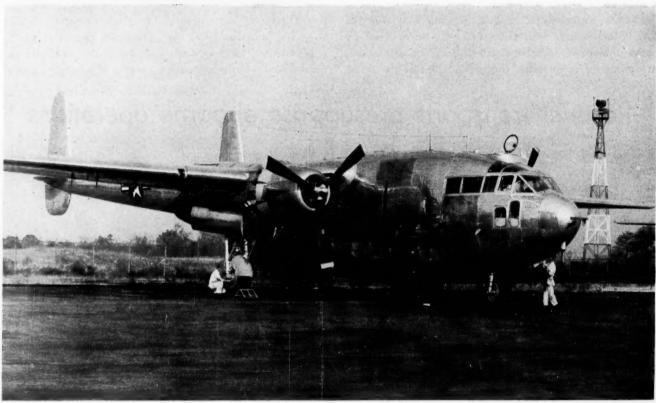




Hughes XF-11 is a twin-boomed, two-place monoplane, spanning 101 feet and 65 feet long, with provisions for six cameras in the nose and booms. Designed as a high-speed photo reconnaissance plane, it has successfully completed its first test flight. A previous model had flown and crashed on 6 July 1946. The cabin is pressurized, and each unit of tricycle landing gear carries dual wheels.

Boeing C-97, Stratofreighter, is a cargo version of Boeing's war-famous B-29. It spans 141 feet across the wing and is 110 feet long. Capable of attaining a top speed of over 300 mph, the C-97 can carry its cargo load of about 40,000 pounds approximately 4,000 miles. As a troop transport, the giant C-97 can carry 134 fully-equipped combat troops or 83 litter patients with four attendants. The Air Force has ordered 10 C-97s and an additional order is contemplated.

Fairchild C-119, is a new and improved version of the well-known Packet. Designed to carry a cargo load of nine tons for a range of 2,000 miles, the box car like fuselage of the C-119 has ample space for a pay-load of more than 10 tons. The C-119 is capable of accommodating 42 fully-equipped combat troops, as well as 20 parachute cans of supplies suspended from an overhead monorail. Two Pratt and Whitney Wasp Major engines give the C-119 a speed of about 200 mph.



Helicopters

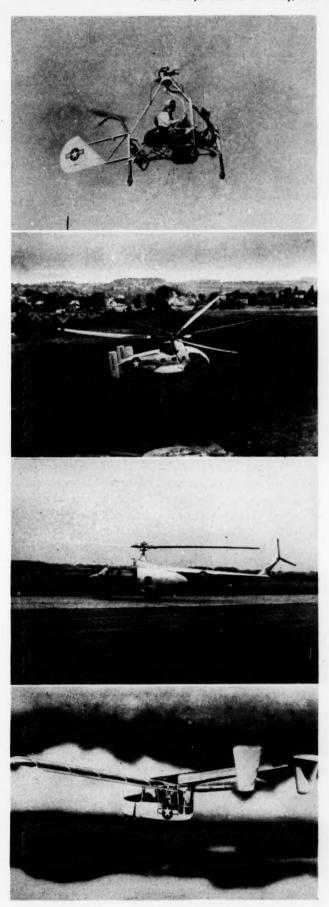
McDonnell Ram-jet was the world's first ram-jet helicopter. It is a three-dimensional aerial motorcycle consisting only of a two-bladed rotor, 18 feet in diameter, with a ram-jet power unit at each tip, a small rudder, and an open steel structure supporting the pilot, fuel tanks, and controls. The whirling rotor blames "ram" air into the duct, which is turned by a fuel mixture injected through the blade and forced out the rear of the tube, producing thrust. The little helicopter has lifted a useful load of 300 pounds, and has attained a forward speed of 50 mph.

Bell XR-12 is a new five-place helicopter designed and built for the Air Forces by the Bell Aircraft Corporation. It has completed preliminary tests at the manufacturer's plant in Buffalo, N. Y. The new aircraft has a top speed of 105 mph and an operating speed of 90 mph. Powered by a Pratt and Whitney 550-horsepower engine, the helicopter has a range of 300 miles and can climb vertically at a rate of 450 feet per minute. Its service ceiling is 13,000 feet and its hovering ceiling is 4,350 feet. It is similar to the Bell Model 42 commercial helicopter.

Kellett XR-10 is the Air Force's largest helicopter and the first twin-engine transport type helicopter in the world. The XR-10 has two counter rotating, intermeshing, three-bladed rotors. Rotor diameter is 65 feet, the largest ever built. Capable of carrying 10 passengers, a pilot, and a co-pilot, the XR-10 is the world's heaviest helicopter, having a gross weight of almost 11,000 pounds. It has a maximum forward speed of over 100 mph and a range of about 350 miles. Only one XR-10 helicopter was ordered.

Liaison

Boeing L-15A was produced for the Army Ground Forces as a liaison aircraft. It is well-adapted for observation, communications, and photographic work. The allmetal plane incorporates external airfoil type flaps, full cantilever type landing gear, provisions for being towed in glider fashion and attachments for floats, skis, or a Brodie type gear for cable landings. With a wing-span of 40 feet, the L-15A weighs 2,050 pounds and is powered by a 125 horsepower Lycoming engine.



Amphtrac Repair Station

By PFC P. A. Kirkner and Sgt G. W. Loper

Make New ones out of old ones is the motto of the 1st Amphibian Tractor Battalion of the 1st Provisional Marine Brigade, on Guam. One of the largest money saving projects in the Marine Corps today is the process of preserving and storing amphibian tractors used by the battalion. Developed by Maj Henry G. Lawrence Jr., commanding officer of the battalion, and further streamlined to the assembly line basis by Capt Michael J. Sisul, maintenance officer, it is estimated that \$30,000 is saved on each amphibian tractor by the use of the new process.

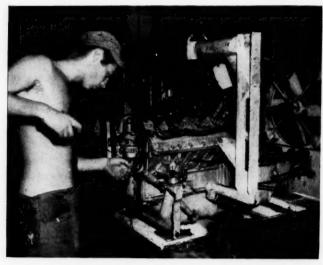
When the 1st Amphibian Tractor Battalion moved to Guam from Camp Pendleton, California, and was placed under the operational control of the 5th Service Depot in September, 1946, its primary mission was to repair, preserve, and store hundreds of LVTs for the Pacific Ocean Area stock level as directed by Chief of Naval Operations. Today over 200 are completed and in covered storage areas.

The process begins in the old storage area where a battered amphtrac is loaded on a lowboy (heavy duty trailer) and taken to the beginning of the assembly line. Here the amphtrac is unloaded and the actual repairing begins.

First the two 110 horsepower Cadillac engines are removed and the engine compartments thoroughly cleaned and painted. The engines are then taken to the motor repair shop where they are checked and parts replaced if necessary. If the motor needs extensive repairing a new or rebuilt motor is installed and the old one is rebuilt or surveyed if the condition warrants it.

The two engines are then tested on a cut-down amphtrac especially designed by the maintenance section for that purpose. After the engine is tested and is considered mechanically perfect it is installed in the LVT and moves down the line.

Next the armor plating is removed and repaired. It is



The 110 hp Cadillac engines are removed and taken to the engine repair shop where they are rebuilt.

then painted and stored for future use. The armor plating is needed only in actual combat.

The third step of repairing is the welding and straightening of the hull to insure water tightness. The majority of amphtrac hulls require extensive repairs due to the rough coral reefs around the Pacific islands where they have seen action.

Next comes the checking and repairing of the electrical system throughout the amphtrac. After sitting in open storage from two to four years the weather beaten wire is usually cracked or rotted and it is necessary to install a completely new wiring system to insure against shorts and power failures.

The paddle style tracks are repaired and replacements are made. These tracks serve both as paddles when in water and as cleats, similar to those on a caterpillar tractor or bulldozer, when on land.

The last step of repairing done in the maintenance shop is that of checking and repairing the suspension system. When the amphibs leave the maintenance shop they are as nearly as possibly mechanically perfect.

UPON COMPLETION of the above repairs the amphtrac is driven to the beach where it makes water and land test runs. The LVT is run at full speed both going into the water and coming out onto the beach to test the durability of the engines and the hull. After the test run is completed and the amphtrac is in perfect running condition it is again loaded on a lowboy and moved to the sandblasting section. From this point on the amphtrac never touches the ground.

The amphtrac is unloaded at the sandblasting section and two sandblasters, clothed in heavy duty suits with a headpiece similar to that used by a deep sea diver, go to work on it. Because of the tropical humidity and the extreme heat during the day on Guam, the suits worn by



The two engines are tested on a cut-down amphtrac and if mechanically perfect, installed in the LVT.

the sandblasters are cooled by air running through an ice chamber designed by the section. A hose to the headpiece of the uniform circulates the cooled air.

THE SAND USED in the blasting operation is carried from the beach in trucks, finely sifted through a thin screen and dried in a home made dryer, a large sized cement mixer, and an oil fed blow torch. The blasting removes all excess dirt, rust and paint in preparation for the preservative painting of the amphtrac. Upon completion of the sandblasting phase the amphtrac is loaded on another lowboy and moved to the paint and preserving section.

The LVT is driven from the trailer onto a cement ramp and the job of cleaning off the dust and dirt accumulated at the sandblasting shop begins. This is accomplished by using brooms and air hoses. Next the entire amphtrac is sprayed both inside and out with zinc chromate primer. When the primer dries the amphtrac is moved to the next spraying unit where it is coated with glycerol phthalate flat green lusterless paint.

After the second coat of paint dries, it is moved to a third spraying unit where it is painted once again, this time with Navy corrosive preventative called Type 1 Paralketone B. When the last coat of paint is dry the Bureau of Ships number and the motor numbers are stenciled on both ends of the amphtrac.

The LVT is then taken to its new framed canvas covered storage shed. While in storage, each LVT is inspected weekly to check for minor defects. The engines are run for at least 30 minutes each week and the amphtrac is backed out of the storage shed to prevent the bearings in the suspension system from seizing. Greasing, charging the battery, changing the oil and refueling are done as required to keep the LVT in perfect ready-to-go running condition at all times.



The LVT is run at full speed both going into the water and coming out to check engines and hull.



After completing test runs the amphtrac is loaded on a lowboy and moved to the sandblasting section.



The sandblasting operation removes excess dirt, rust, and paint. Preservatives are then applied.

One Eye on the Last War

THERE IS A SOMEWHAT SHOPWORN SAYING THAT WE prepare for the next war as if we were going to fight the last one. We think of war in terms of our personal experiences in combat—last-war type of combat, of course.

This attitude was quite prevalent in our Advanced Class, the first nine-month postwar class at The Infantry School, and it led to some interesting discussions of the solutions to tactical problems. These discussions and arguments

were not so much a case of student versus instructor as they were of one student group versus another student group.

When it came to solving tactical problems the class seemed to automatically divide itself into a number of small groups, each composed of students with common experiences. Usually these groups were based on what theater of operations they had fought in, whether they went overseas early or late in the war and thus met an aggressive or retiring enemy, and whether they fought the war on a level higher or lower than regiment.

Of the 114 U. S. Army officers in the class (there were also four U. S. Marine officers, plus 22 officers from six foreign countries) a little less than half had combat experience at the regimental level or lower and slightly over two-thirds had served in the European and/or Mediterranean Theaters. About half didn't get overseas until late 1943 or early 1944.

Thus, when we students were given tactical problems we used our experiences as a background and a guide for solving the problems. Quite frequently these solutions varied greatly, and each student was positive he was right because his solution was based on his own combat experience. The trouble was, none of us had fought in more than a few different types of combat conditions and we looked at all problems through a narrow aperture.

The use of tanks in the attack brought out a lot of hot discussion. Those who fought in Tunisia, Sicily, and Italy remembered the Germans' ever-present tanks, anti-

tank guns, and their acres and acres of mines. These students, knowing that when one of their attached tanks was

knocked out it was without a replacement and lost and gone forever, believed that the infantry should precede the tanks to locate the mines and AT guns, and that the tanks should follow the infantry close enough to support them by direct fire. Those who took part in the race across France following the breakthrough at St. Lo or who saw the use of armor when the Americans returned to Luzon, believed that tanks were properly employed only when they attacked ahead of the infantry.

It was pretty much the same story on the use of tanks in attacks on towns. Those who fought for Aachen or St. Lo thought it a moot subject. They knew there was so much rubble in the streets of a town that no tank could precede the infantry even if there weren't any mines or AT guns present. This was countered by those to whom an attack on a town meant firing grass shacks with napalm or WP, and then moving the tanks in over the

ashes ahead of the infantry the same way as over any other terrain. In agreement with these was the group that had run through Germany after crossing the Rhine, where tanks working well ahead of infantry would catch the enemy off balance, and by their mere presence in a town cause the German soldiers to surrender and the civilian populace to hang white flags from the windows.

In one problem we had a situation in which the reserve battalion was to attack on the right of the regiment where the I&R Platoon* reported it had pushed forward to a crossroads about fifteen hundred yards ahead of the two front-line battalions. The I&R Platoon had contact with the enemy but did not have contact with any adjacent friendly units. One thousand yards to the left front of the crossroads there was a known enemy position of company strength. The area was wooded and nowhere could you observe for more than about two hundred yards to the front. The question was how far forward should the battalion commander go to make his reconnaissance and issue his attack order.

After receiving the regimental attack order some of the officers in the class wanted to take off for the crossroads with three jeep loads of staff, tank and artillery liaison officers, and other battalion hangers-on, contact the I&R Platoon leader, make a reconnaissance, and issue the order there near the crossroads. They had done that in combat so therefore that was the proper solution. Obviously their combat experience had come late in the war when you could pull such tricks against a retiring enemy and get away with it.

But those who fought an aggressive, unbeaten and advancing enemy in the early stage of the war felt that assembling a command group of that size and taking it that close to the enemy was kissing it good-bye. These early fighters had caught enough mortar and artillery fire to be firm believers in not assembling any group at a vantage point or issuing any orders there, as contrasted to a few of the late fighters who argued that a vantage point was the proper place to issue an order.

Combat experience also brought out different ideas on the use of terrain. Woods were deliberately avoided by those who had experienced the tree bursts of the Hurtgen Forest and similar areas. Officers who had fought in the early days of the war when the enemy ruled the air and didn't hesitate to strafe a small foot patrol or single vehicle deliberately sought wooded areas for concealment. Officers whose fighting had begun after we had air superiority, or who had fought in the jungle where the lack of enemy artillery made tree bursts no problem, weren't too concerned about either avoiding or using wooded areas.

When we were in combat most of us replaced the broad general principles we had been taught with definite, specific rules that fitted local conditions in an effort to find short cuts or easier ways to do our jobs.

To a certain extent this was necessary, particularly where casualties were heavy and we had to train leader replacements in a hurry. Last month's private was a staff sergeant today, an acting platoon leader eligible for a battlefield commission. He had nothing but hard rules drilled into his head from Old Lady Experience herself, and from the squad leaders, platoon leaders, and company commanders before him.

As the war went on we adopted more and more of these hard and fast rules. There are hundreds of them, and they're all very familiar by now, contradictory as some may be—"stay out of woods," "tanks ahead of infantry," "perimeter defense," "attack the mortars," "no movement at night," ad infinitum.

But now we've forgotten that the rules were adopted as expedients under certain limited conditions. Today they are looked upon as lessons learned in combat. The broad general principles are almost totally replaced by these specific and narrow rules. I believe that looking upon these specific local ground rules as lessons learned from combat is a serious error, whether we be student or instructor, line or staff officer.

These rules are merely specific applications of the general principles. These principles must be remembered for future use, not the local rules which change with combat conditions. We make the mistake of trying to use the same rules in any situation. This may be disastrous in the future.

World War I had its trench warfare and very narrow fronts while open blitz warfare was one of the characteristics of World War II.

"New" combat conditions of the past war included desert, jungle, and mountain fighting, as well as amphibious and airborne assaults. If another war comes, combat

may include fighting on the tundra and perpetual ice of the Arctic, or over areas previously submitted to atomic or bacteriological attack.

A Military Digest

Emphasis on combat experience is quite all right but we must recognize that for the vast majority of us it is nothing more than experience gained in the last war under a limited number of combat conditions. These conditions may or may not again occur in a future war. We must think of war in terms of all the combat conditions possible rather than in terms of our personal experiences in combat in the last war. The principles of war still do and will apply. It is the local ground rules we adopted during the past war which will change.

^{*}Intelligence and Reconnaissance.

Morale, Discipline, and Leadership

"Come in, Base Plate," Dusty said, nodding towards the one vacant chair. "If you are still wrestling with that leadership course for battalion officers school, you'll be interested in this argument. Boat Space claims that the way to learn leadership techniques is to observe recognized leaders and simply copy their methods."

"Well, I still think I'm right," Boat Space growled. "If some method or mannerism works for one bird, there's no reason why it won't work for another. However, Johnny says I'm wrong."

"I didn't say you were wrong," Johnny laughed. "I just said it's not that simple. I agree that we should all study the techniques used by recognized leaders and adapt them to our use whenever possible. However, you notice I said study and adapt; whereas you, Boat Space said copy. In other words, I feel that a technique that works for one man will not necessarily work for everyone else. For example, we've all seen lieutenants make the mistake of copying some hot-shot NCO. Whereas the NCO's techniques of handling the men went over fine, when the lieutenant tried them he appeared ridiculous."

"Why?" Boat Space asked somewhat mollified.

"Because no two of us are the same," Johnny said.
"When a little man struts around displaying his selfconfidence we laugh and say he's cocky. When a big
man does the same thing, we growl and say he's conceited. When the handsome, intellectual type like myself
roars and bellows, it sounds too out of character and
therefore falls flat. But when the ugly, more-brawnthan-brains type like you sounds off, the men like it."

"I think Johnny is right," Dusty chuckled, "but let's see if we can't pin this down a little. Maybe we can think of some of the more general problems that require leadership techniques for their solution. Once we have done that, we can then observe the officers and NCOs that we serve with or read about and see how they handle them. Furthermore, it should help us recognize poor leadership techniques and learn a lot on that score."

Everyone accepted Dusty's idea with enthusiasm, and for a while the only sounds in the room were the lighting of cigarettes and the shifting of bodies to more comfortable positions. Finally Johnny spoke.

"How about discipline?" he asked. "What techniques

can be used in obtaining discipline?"

"It seems to me," Dusty answered, "that all methods, both ancient and modern, appear to be based on rewards and punishment. Punishment as a means of enforcing discipline has always existed, but that's the easy way out. Instead of securing discipline based upon fear of reprisal, we should base our discipline upon training and incentives coupled with good leadership."

"If the men have self-pride, esprit de corps, and patriotism, they will readily accept discipline," Johnny said. "I think anything we can do to develop these in the men could be considered as good leadership techniques. For instance, instead of constantly reminding the men that if they get a snoot full on liberty and slug a cop they'll be put in the brig, we should constantly remind them that such conduct indicates poor training and brings discredit to the Marine Corps, the man's family, and the man himself. After all, we're interested in a man because he's a marine, not simply because he's an individual 20 years old with blue eyes and curly hair. Once we get that point across to him, it's easier for him to accept the fact that as long as he claims the title 'marine' there are certain things he must do and certain things he must not do."

"Here it is," Boat Space interrupted, holding a field manual he had taken from Dusty's desk, "FM 22-5 says that discipline is the state of order and obedience among military personnel resulting from training."

"Well, that's what I said at the first," Dusty commented. "Furthermore, that's what Johnny has just been advocating. The best way to obtain good discipline is to have good training on the subject. Explain to your men why a military organization must have discipline and teach them to take pride in being well disciplined. In a way, it seems to me that teaching discipline to an outfit is merely teaching them to remember. In other words, a well disciplined outfit is one whose members always remember that they are marines. No matter how bad a man seems, there must be times when he takes pride in being a marine. When he gets off base, it's mainly because he's forgotten for a while that he is a marine. The German goose step is certainly not a natural way to walk, but while doing it the men remember

Boat Space's critics at the "Ale and Quail Club" convince him that morale is wanting to do what you have to do. Men can be tired, hungry, lonely, and afraid and still not grumble if their leader shares the same misfortunes with them

they're soldiers. The funny way the British have of throwing the left arm out straight while marching at attention accomplishes the same thing. Therefore, if we look at discipline as teaching the men to remember what they are, I think we would obtain better results than if we think of it as punishing the men for not remembering they are marines. After all, if they can't remember it means that they haven't been well instructed, and if they haven't been well instructed, whose fault is it but our own."

"You know, there's one thing that might work along that line," Johnny said thoughtfully. "If we took a few minutes periodically to read the enlistment oath to all hands it would help them remember their contract with Uncle Sammy. Or, if at office hours, the commanding officer carefully talked over that oath with the man on the carpet it would probably accomplish more than just the usual growl. In either case, it would make the men realize that when they disobey an order or regulation they are branding themselves as liars and as men whose word is worthless. Very few men have such little self-respect that they will deliberately degrade themselves in this manner."

Boat Space had been fidgeting around waiting for Dusty to finish his spiel, and now he sounded off.

"That's a swell way to look at it, Dusty," he said enthusiastically, "and I agree with you and Johnny. While you were talking, I thought of another problem that we should consider, and that is morale. As a matter of fact, I was reading a definition of morale just this morning. As I remember it, morale is wanting to do what you have to do."

"Right," Johnny said, "and here again we have the need for thorough training. Men can be hungry, afraid, tired and lonesome for home and honey and can still have excellent morale if they have been trained to expect these things on a campaign and as long as they know that their leader is sharing these hardships with them. They will even face death at his command if they knew that he is willing and able to lead the way into the danger."

"The old Marine custom of the officers eating at the end of the chow line always particularly appealed to me since it showed definitely that we were interested in our men first and ourselves second," Dusty said, and continued, "Although there was never a shortage of food in the experience of most of us and particularly during training in peace time, the custom still shows how we

as officers feel towards the men we have been given the privilege of commanding and the responsibility of caring for. As long as the men know we are constantly working for them, we'll have little worry about their morale."

"That reminds me of a story about Gen Cates," Johnny said. "Our new Commandant, while he was a major, once said words to the effect that a lot of officers spent most of their time worrying about what those senior to them thought of their abilities and efforts. However, he figured that as long as he worried about what those junior to him thought of his abilities and efforts, his superiors would have a good opinion of him."

"Well now, Dusty and Johnny have both referred to training while talking about discipline and morale," I pointed out. "For my money, training is a problem in itself that requires leadership techniques."

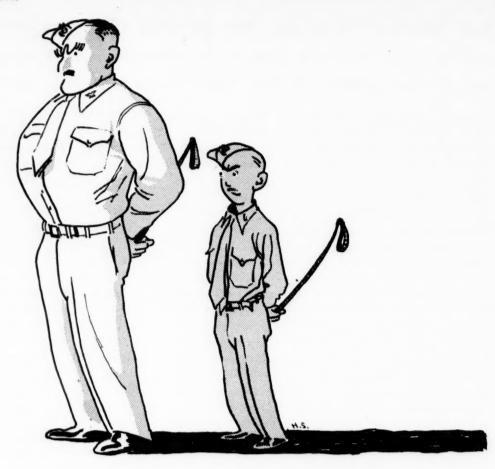
"I agree, Base Plate," Dusty smiled. "However, I think that sometimes we miss the basic principle, from a leadership standpoint, behind training. All too often we think of it as just a means of passing the time while we wait for a campaign or just an excuse for a bunch of officers and NCOs to get out and throw their weight around."

"What else is it but that?" Boat Space growled. "Sometimes I get so tired of it I think that organized athletics would accomplish just as much good."

"The basic purpose of training from a leadership standpoint," Dusty said, "is to develop group spirit. This is important because a man is extremely sensitive to the voice of the group. This group spirit is obtained by men having to eat, sleep, work and play together. It is increased by group accomplishments such as marching, drilling, or fighting. If the leader closely supervises and participates in the training, he identifies himself as not only the head of the group but also as a member. Good group spirit gives the members self-confidence since they belong to the group, it causes them to fear failing the group more than anything else and it makes them go out of their way to remain worthy of the group.

"Now, Boat Space, organized athletics aid very much in developing this group spirit, and although it is not the only means, it is a very important one."

"Speaking of organized athletics reminds me of another problem requiring leadership techniques, and that is physical fitness," Johnny said. "A healthy, tough, cocky outfit is easier to lead since they want to go.



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Furthermore, this doesn't only apply to outfits or to the individual man under us. I think the way some officers let themselves get out of shape during peace time is a disgrace. Everyone should realize that physical fitness builts a man's self-confidence and increases his optimism, cheerfulness, energy, determination and fortitude. I think any technique an officer can use to keep his men and himself physically fit is a long step towards good leadership."

"Physical fitness also makes an individual less susceptible to fear," Dusy said slowly, "and that brings up probably the toughest problem of them all—a man's emotions."

"What's so tough about that?" Boat Space asked. "I learned in school that emotion is a strong reaction to what a man feels in an important or disturbing situation. I also remember reading some place that love, anger, and fear are said to be the primary emotions."

"Okay," Dusty laughed. "Let's just stick to the primary emotions and leave the love until last. Can you name a leadership technique for controlling fear?"

"Sure," Boat Space answered immediately, "keep the men active while they are waiting for the fireworks to start. Anyone who has ever been in a battle hates to wait for the action to begin since they naturally don't like fear and know that they will probably lose it as soon as the fight starts."

"Humor lessens fear," Johnny smiled. "In a tight spot, a laugh can really do the trick. I remember prior to landing on Saipan a captain in our outfit told his company that as soon as they reached their objective they should dig in quickly since the enemy would probably throw everything, including the kitchen sink, at them. As predicted, the enemy launched a strong counterattack which was led by a tank. As the men nervously watched the enemy coming toward them one marine yelled 'Hey, Mac! Tell the captain that the kitchen sink is coming!' The chuckle that ran down the line lessened the tension and the attack was successfully repulsed."

"Discipline certainly lessens the effect of fear," Dusty said, still grinning about Johnny's story. "Good discipline will start the man towards the right action. Then, as Boat Space said, once he is in combat his mind will clear as the fear disappears.

"I also think that calm behavior lessens fear because both fear and self-possession are contagious. Furthermore, assumed calm lessens fear in the man who assumes it and gives his pride a chance to work against his panic."

"Religious faith certainly helps," Johnny said. "I've read of many leaders who encourage prayer before com-

bat among their troops. A man doesn't remain an atheist very long in a fox hole. Along the same line, loyalty diminishes fear. Men who do not believe in God may be controlled by a strong loyalty to their comrades, or unit, or leader."

"Most men fear mental breakdowns or injuries to their eyes, brain, and genitals. If they were shown by statistics that these are in fact the most uncommon injuries, these men would be reassured. In other words," Dusty concluded, "I think a lot of men fear other things more than they do death."

"I agree with you, Dusty," Johnny said, "but I think the main thing we should get across to the men is simply that fear is natural and is highly contagious but that courage is also highly contagious. Now let's get on with this because I want to hear Boat Space's theory on love, and we still have anger to settle."

"Well," Dusty drawled, "I think that uncontrolled anger is dangerous because it destroys judgment and can easily cause fear to grow into panic. On the other hand, I think that controlled anger is valuable in directing a man's efforts against an enemy since it does not destroy judgment. Self discipline, resulting from self training, is the main thing that will help you keep your anger under control."

"I guess that ties up anger," Johnny laughed as no one offered any objections or additions to Dusty's opinions. "Now, Boat Space let's talk of love."

"I've heard of plenty of birds dying from lack of food or water, but I've yet to hear of anyone dying because his sex drive is obstructed," Boat Space said.

"That's true," Dusty smiled, "but you will admit it causes emotional problems. I think religion helps, and I also think men should be encouraged by their leaders to correspond with their wives, sweethearts, and families. Wholesome recreation will help on the mental side."

"Yes, and hard work and plenty of exercise will help on the physical side," Boat Space added.

As the discussion ended by mutual consent and we all started for dinner, Dusty commented, "Well, we covered some of the general problems that require leadership techniques, and we even talked about a few of the more general techniques. As we said at the start, we should all observe the leaders we come in contact with and learn from them how they handle these and other problems. However, I think that Johnny's original point still stands in that we should study and adapt their leadership techniques to our own personalities, but for us to copy them is, in most cases, undesirable."

US # MC



The New Service Record Book

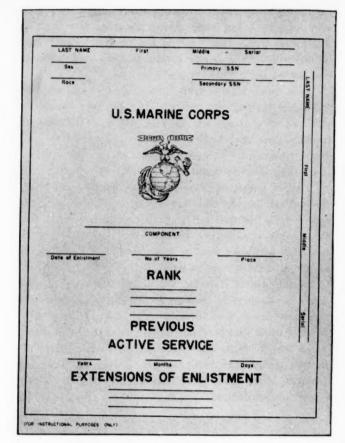
By Capts Joseph J. Reardon and Philip N. Pierce

LAST NOVEMBER THE COMMANDANT OF THE MARINE Corps took official steps to set in motion the wheels which will eventually do away with the old document style service record for enlisted men.

The present service record book has been in use in its present form, with a few minor revisions, some 31 years. Information is not readily available as to who introduced the service record to the Marine Corps, but the consensus of opinion among the "oldest inhabitants" at Headquarters seems to be that the book was lifted in its entirety from the Army. Marines serving with the AEF in 1917 and 1918 became familiar with the Army type service record and considered it to be an improvement over the type then in use throughout the Marine Corps. As a direct result, the Army type record was eventually adopted by the Corps.

The service record currently in use has never been revised rapidly enough, during its 31 years of faithful service, to keep pace with administrative changes nor to completely serve the purpose for which it was intended. Most men can, and do, complete an entire enlistment with but one-third of the available spaces in their book being used. This has been particularly true in the case of the Reservist and the inactive Reservist.

Consequently, a board with Col Lester S. Hamel, Officer in Charge, Enlisted Performance Division, as senior member, was appointed by the Commandant "for the purpose of examining the present service record book, Form NMC 109-PD, and regulations pertaining thereto, with a view to recommending changes in the form and content to conform with changed administrative procedures and requirements." The Board consisted of representatives of the Division of Aviation, Disbursing Branch, Supply Department, Division of Reserve, and Records Branch.



Name, rank, and serial number are placed both at top and side of the book for filing eventualities.

The problems confronting the Board were numerous, the most vexing of which appeared to be the "automatic objections" of a certain group of die-hards who refuse to admit that times and administrative procedures have changed. This bloc based their objections to change on the fact that the present service record has been made to serve the purpose over a period of years and is, therefore, "good enough."

The second problem concerned the desire of the board to produce a book which could be used by all of the components of the Marine Corps—Regulars, Reserves, and the Women's Reserve. This desire was based primarily on reasons of economy. From the economic standpoint, it was also apparent that attempts had to be made to prepare for future exigencies and produce a book which would be easily adaptable to such possibilities as Selective Service or Universal Military Training.

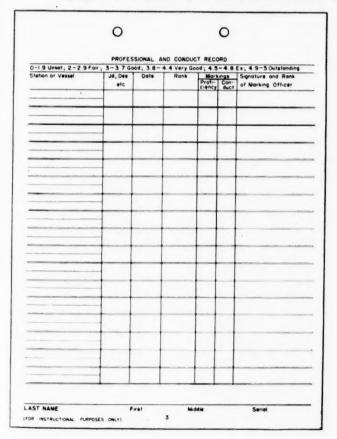
A third and highly important point was the time element. The Quartermaster's supply of the present service record book is practically exhausted. In view of the accelerated Reserve Program and the undesirability of having a new supply of the present style record printed, it was imperative that the new record be ready for distribution by June 1948.

Last, but by no means least, was the problem posed by

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The photograph and index are placed on page 1. The enlistment or induction contract is on page 2. The professional and conduct record is on page 3 and offenses are listed on page 4.



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Expeditions, engagements, and combat record are kept on page 9. Pages 10, 11 and 12 are devoted to pay, loss of time, and allotments. Entries are made on page 12 only when the book is closed.

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the almost insurmountable restrictions imposed by the budget.

The Senior Member of the Board assumed the attitude that any sort of a modification or revision of the present service record could not be other than an improvement. He directed one member of the Board, an ex-first sergeant with over twenty years service, to draw up and present to the Board his idea of what a service record book should look like. His concept of such a book was presented to the Board at its first official meeting. The time selected for the Board to convene was most opportune, since the Marine Corps Manual was in the process of revision and the necessity of being bound by present regulations was not apparent. It was felt that the Manual could be tailored to a degree, if necessary, to conform to the service record finally adopted.

The Board reached agreement on their third meeting. At this writing some one-hundred-odd pilot copies of the proposed record book have been forwarded to a selected group of organizations and posts for study, comment and recommendation.

It might be well to point out here that the fastening device (Acco fastener), which is used on the trial books sent into the field, is not considered desirable. Experience has proved that insert sheets will, in time, become mutilated when secured by this type of fastener. To date all desirable "snap post" fasteners submitted by civilian agencies are prohibitive as to cost. In the event a suitable fastening device can not be obtained, it has been proposed that the insert sheets be "linenized" at the top to protect them from the sharp cutting edges of the Acco fastener.

The new record is a loose-leaf style book, measuring eight by ten and one-half inches. This type of book was chosen for a variety of reasons. It is readily adaptable to change, even under the most adverse conditions, and at little additional expense. Changing administrative procedures may be incorporated by simply designing and inserting a new page. It will provide greater space in which to make entries. With this format it will be possible to make all entries in the service record book with a typewriter, thereby presenting a much neater and more legible appearance. The book will be composed only of such pages as are essential to cover the particular individual's service. For example, if a man served his entire enlistment with no offenses, neither the offense page nor the record of courts-martial would appear in his book. The practice of clipping into the book such documents as copies of allotments, embarkation and debarkation slips, courts-martial memoranda, etc., will no longer be necessary. Proper space has been provided in the new book to cover all such contingencies.

There appears to be some possibility that the Marine Corps will, in the near future, adopt the Navy system of

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Page 18 has been designed for the use of Reserve organizations and will be issued only to them.

pay. If such becomes the case, the pages in the proposed book relative to pay entries may be removed without disturbing the remainder of the book.

The fact that entries may be made with a typewriter also offers another great advantage. No doubt the time will again come when, for one reason or another, large numbers of service record books will be either lost or destroyed. With the loose-leaf type of book it will be a simple matter to make carbon copies of the original sheets. This will enable Headquarters to furnish a complete service record on any given individual. The present system of furnishing a so-called "skeleton" service record is of very little value to commanding officers, and does not present anything of informative value about the man's past service.

All comments, suggestions or criticisms should be sent directly to The Senior Member, Board to Revise Service Record, Headquarters, U. S. Marine Corps, Washington 25, D. C.

Statistics at hand indicate no great problem in inaugurating the new book. As of January 1, 1949 approximately 17,500 will be in use by simply supplying Recruiting Officers and Posts and Stations for use in first enlistments and reenlistments. By 1952, every enlisted marine, except a possible estimated 200, will have a new service record.

Cold Weather Combat Clothing

SINCE THE END OF WORLD WAR II ALL BRANCHES OF the service have been conducting extensive tests and continuous operations in arctic and extreme cold weather areas. The Marine Corps has had observers or participants on almost all of these operations. It will probably be some months, however, before we begin to hear conclusions or see changes made as a result of these experiments.

To the average Marine officer the problems and experiences of field operations in very cold climes is purely

hearsay. Marines are, by and large, warm weather fighters. In all of our battles since World War I khaki or cotton dungarees have been satisfactory uniforms and the problems of keeping warm and dry while living in the field have not been very great. Now we can no longer base our thinking or planning on the assumption that we will carry on future operations under warm suns in tropical or semi-tropical areas. At the same time we must not sit back and wait for reports of the special needs for living and fighting in the very cold arctic and polar areas. For the chances are that any extensive military operations of the future will not be carried on in

those regions either. The history of the world's wars

would indicate that most battles are fought in the tem-

perate zones. Future operations of any great scale will probably continue to be in the habitable areas. Our

planning should be with this possibility getting as much attention as is the more unique problem of arctic war-

Since the Marine Corps' experience with field operations in cold temperate areas is very limited we will herein deal primarily with the clothing problems imposed by carrying on extensive warfare within the temperature ranges of 60 to 0 degrees farenheit, conditions that include rain, moderate snow, and extensive mud. These are typical of winter in North America, the European and northern Asiatic continents, in fact most of the historic battle areas. The special considerations of arctic warfare will undoubtedly be dealt with in future articles.

The 1st Marine Brigade (Provisional) that landed on Iceland, July, 1941, was probably the only Marine field

force to face life in cold weather during the recent war until Marines landed in Japan and returned to North China at the end of the War. The clothing worn by Marines in these latter forces was a great improvement over that taken into Iceland. Most of the Iceland Brigade left San Diego prepared for tropic duty. A subsequent change in plans resulted in the Brigade arriving in Iceland with plenty of khaki, sun helmets, a sea-bag full of

"scivvies" and cotton shirts, and a winter service uniform and overcoat. No one was clothed or equipped to live

and fight for very long in the "boondocks" of rugged Iceland.

By Maj M. S. Hall

As a result there was a run on British Army QM stores by Marine officers outfitting themselves with British boots, trenchcoats and fine woolens. The marines were soon issued good items of standard clothing such as flannel shirts, fur caps, woolen underwear and rubber storm galoshes. In addition items of "protective clothing" began to reach the marines from QM purchases in the States. Wool socks, hunting clothes, rubber suits, sheepskins, and mittens were added to the marines' already stuffed clothing bags. The winter service green uniforms, although warm, were too tight fitting for field or combat wear—besides they had to be preserved for guard duty and liberty. So the Iceland Marines carried on, warm enough, true, but improperly uniformed for fighting and living in the field.

It was then Marine officers first recommended that the Marine Corps adopt something similar to our present winter service uniform.

Fortunately marines in Iceland did not have to fight or live in the fields of that cold, bleak place and early in 1942 were able to put on their tight "greens" and stagger home beneath their heavy sea-bags full of khaki, scivvies, and long underwear, having experienced no trench foot, frost-bite, or otherwise suffering from service near the Arctic Circle.

Those marines donned jungle suits and fought the rest of the war in the warm South Pacific while many of our Army brothers learned the hard way about living in the cold and snows of Europe and Alaska. They developed If we had to fight in a temperate-to-cold climate now, this is what we could do to keep warm and well with our present clothing. The shoe pac continues to be the biggest problem. Its lack of support makes it difficult to march in.

some fine clothing as a result of their experiences and this clothing was subsequently ready for marines to wear in the invasion of Japan. But with the end of the war went the opportunity to experience combat in the cold, wet, and snow of the northern hemisphere. Veterans of winter fighting in Italy and the Battle of the Bulge will tell marines how lucky they were to miss this experience. Nevertheless winter warfare remains a constant possibility and demands our attention. The colder the weather becomes the greater is the importance of proper clothing and equipment to the point that in extreme cold most of a fighting man's energy is used up in keeping warm, and logistics becomes a gigantic problem of keeping men warm and alive in the face of weather alone.

TODAY THE MARINE CORPS has stocks of fine quality combat uniforms and cold weather apparel, but there is daily evidence of a lack of appreciation of this clothing. Our many items of winter clothing demand an understanding of the principles of employing layers of clothing, as well as the increased logistical problems of supplying and caring for clothing during field operations. It is our purpose to discuss the various items of clothing that marines will possibly wear in the cold; how they should be worn, supplied, and cared for.

It should be the aim of our field commanders to insure that their troops are warmly clad in practical clothing, that it is not too bulky to fight in, and that presents a military, uniform appearance insofar as possible. We have the clothing that will make this possible if all hands are indoctrinated in how to properly dress and live in cold weather.

In dressing for cold weather it is necessary to understand the method of donning layers of woolen items with an outermost garment of wind-proof and rain-repellent material. The principle behind this is that several layers of light woolen material provide dead air space that insulates, facilitates evaporation of body heat, and is otherwise more efficient covering, if it has an outer wind-proof layer,—than is something heavy and bulky such as a sheepskin coat or a heavy woolen overcoat. Winter sports clothes designers and particularly skiers have known this for years. Army TM 10-275, Principles of Cold Weather Clothing and Equipment, carefully and fully explains the layer principle in dressing for cold weather, and gives detailed instructions in the use and care of items of winter clothing.

Maj W. M. Reynolds, USA Medical Corps, writing on "Preventive Medicine in Winter and Mountain War-

fare"* says:

"To preserve his unit's fighting strength the soldier is taught certain skills. Among these are the proper wearing of clothing and equipment—the drying of sleeping bags and socks, and other things which will make him a better mountain and winter soldier.

"Of all the weather conditions making trouble for mountain and winter soldiers, cold is the most serious. Cold may be uncomfortable and dangerous if mal-fitting and improper clothing is worn. Over a long period of time it can become demoralizing. The most serious thing that can happen to a soldier is to become overheated on a cold day. If he perspires faster than his sweat evaporates his clothing will become damp and may freeze.

"Before men enter actual winter combat, examinations should be conducted to test their winter knowledge. It is essential that they have more than a manual dexterity. They must understand the reasons for what they are doing."

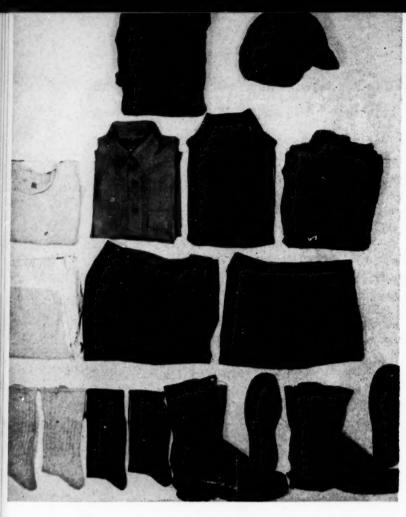
So here we see an important responsibility of command wherein living in the cold weather becomes a problem of as great a magnitude as was fighting jungle weather and diseases. It demands planning, indoctrination, supervision, and leadership.

The foundation garment for winter dress is the tried and true long underwear. Worn by generations of farmers and woodsmen the snug, warm "longies" only have to be proven to the city-bred fighting man. A force in the field should order all hands into woolen underwear come the first frost and they should be worn until spring thaw weather. A good trick is to wear the regular cotton undershirt and drawers next to the skin beneath the woolen underwear. This helps minimize the need for washing the woolens and also saves the tender hides of those who don't like the feel of wool. The cotton undershirt can also be taken off and quickly dried out.

The next item of standard clothing that should be worn is the fine Marine Corps flannel shirt. For wear in combat operations this shirt presents the problem of shrinkage when laundered. Careful planning of sizes issued and washing in lukewarm water will help insure that this shirt remains loose fitting. The sweater, wool, high neck, has been found to be particularly satisfactory and can be worn next, over the shirt.

The next basic layer of clothing consists of the trousers, service, wool, green, and the jacket service, wool, green. At this point the reader may gasp,—"Not

^{*}Military Review, November 1944.





Two pairs of wool socks; shoe pacs; long woolen underwear; winter service trousers; cotton OD trousers, made of the same material as the M1943 field jacket; high neck wool sweater; alpaca lined vest; winter service jacket; and cotton OD cap constitute the under clothing for cold weather combat clothing. A combat boot that will prevent frozen feet and trench foct must be developed before all around foot comfort is provided.

our nice 'greens' in combat!"

Yes, our service greens are primarily intended for combat wear. That is the reason for their design and color. If anyone feels they are too nice to wear in the field—then the tax-payers are getting fleeced by having to supply us two non-functional dress uniforms and the Marines are being denied a fine, warm, serviceable field uniform. Marines recently in Polar regions will testify as to how warm the service greens are. However, for field combat wear the service greens also present a problem of cleaning and laundering. If our winter service greens cannot be laundered by a mobile laundry unit without undue shrinkage then the material should be reconsidered or other provisions made to cleanse these items under expeditionary conditions. There will be no dry-cleaning or pressing plants on future frigid beachheads. These articles must not fit so tightly that they restrict the circulation of air.

The field jacket M1943, (The one with all the large pockets and drawstring waist) is a key number of our family of layered clothing. It is our outermost garment that is windproof and rain resistant. It has field ration and grenade pockets and will stand lots of mud and rough wear. The instructions inside the collar carefully explain how this jacket is to be worn and all winter troops should know them as well as they know the zero of their weapon. This jacket must fit loosely over all inner layers. It can be adjusted for varied temperatures.

Teamed with the jacket are the cotton, OD, trousers of the same material and purpose. They are best worn over the wool green service trousers. They come complete with suspenders to prevent unduly confined belted waists and are worn as outer layers to stop the wind and deny the mud. These trousers are not to be worn in lieu of utility trousers or for all-season purposes. They are

The outer garments include the M1943 field jacket and overcoat type parka with lining. The wind-resistant, water-repellent field jacket is worn over the service jacket. The parka, the last piece of clothing put on, is for very cold weather. It is bulky and constricts the movement of the combat marine. Issue gloves offer only fair protection. The addition of a mitten shell with a trigger finger is recommended. The M1943 field jacket has pockets for field rations and hand grenades.

properly reserved for special cold weather wear.

A field jacket hood is also a part of this outer protective layer. It buttons on to the jacket and can be pulled up over the steel helmet or the cotton OD field cap to help break the wind.

This latter item; the cap, field, cotton, OD, is another protective garment for winter wear, having a rain resistant texture together with ear flaps and a visor. Because this cap resembles the cotton utility cap many units wastefully permit this special winter cap to be worn all year.

This just about completes our basic cold weather uniform for average cold conditions except for the problem of covering the fighting man's vulnerable extremities.

First the hands: The standard OD wool gloves with leather palms are fair protection, being loose at the wrist and only as serviceable as any cheap pair of wool gloves. However with the addition of the mitten shell with the trigger finger or upon being replaced by the wool mitten insert with the trigger finger we again have a layer combination that has proven itself for years in the winter sports field.

₩ITH OUR FEET we face controversial problems of care and covering that started with the frozen feet at Attu and reached strategic proportions with the trench-

Long underwear forms the foundation for winter combat clothing. They can be worn over shorts.



foot casualties of the Army in Europe during the winter of 1944-1945. Protection for the feet is a subject the Army airs constantly in their service journals. We must pay heed and profit by their experience. In short, the U.S. Army in the ETO found early in the war that; the canvas legging was unsatisfactory when wet and cold, and that the dubbined field shoe was not adequate protection. The Army parachute boot was the most satisfactory combat, non-rubber footgear. The Marine Corps now has the five-buckle rubber arctic storm boot to wear with our shoe and leggings; however, this combination is not considered satisfactory for foot troops. In addition we have the rubber soled, leather topped shoe pac with the felt insoles and worn with ski socks. The shoe pac is an esteemed item in the North woods but is not yet accepted by all of the military. Many infantry men claim the shoe pac's lack of support make them difficult to

The Prevention of Trench Foot is well covered in The Bulletin of the U.S. Army Medical Department, of April 1945:

"In the matter of footgear, modifications have been made in the shoe pac to improve its 'ground grip' and to afford better support for the foot. It comes in full sizes and three widths. These shoe pacs should be fitted prop-

The flannel shirt, green trousers, and two pairs of wool socks are put on over the long underwear.



erly when worn with one or two pairs of socks, wool, ski. The same applies to the combat boots which are usually fitted to be worn with one pair of socks. When sock combinations are worn, a larger size will be necessary to prevent constriction of the circulation. Socks must fit comfortably loosely but not loosely enough to permit wrinkling. The socks or sock combinations for combat boots (or USMC field shoes) advised in order of preference are (1) socks, wool, cushion sole, two pairs; (2) socks, wool, cushion sole, and socks wool, light, one pair each; (3) socks, wool, light, two pairs; and (4) socks wool, heavy, one pair."

Proper fitting of shoes and socks, instructions in how to keep shoes and socks dry, the importance of changing to dry socks daily, and the correct care of the feet should be important parts of winter warfare training.

Other standard items of issue that may be added to the above layers of clothing are; the vest, alpaca lined, a warm but bulky item that has not been found as satisfactory as one of the various types of wool sweaters, the green flannel muffler, and of course the green wool overcoat. The overcoat might be satisfactory protection for rear echelon and service troops but front line combat troops should not be burdened with it.

In addition to the field cap, OD, which can be worn

The high neck wool sweater is worn over the flannel shirt. The shoe pac is far from perfect.



under the helmet, we have a heavier storm cap with a skin or pile lining that can also be worn under the helmet.

The last item that we shall mention that may supplement the field jacket as an outer garment is the parka, overcoat type with a pile liner. This fine piece of clothing is for very cold weather wherein maximum protection is needed. It is bulky and, as do the other heavier items, it constricts the active combat marine. When temperature conditions reach the point where many of these heavier layers of clothing have to be put on, the problems involved are those of arctic warfare which are beyond the scope of this paper.

I

VETERANS OF THE PACIFIC WAR will remember how quickly all clothing became dirty and worn out. They will remember how all hands washed their light cotton underwear and utility clothes in jungle streams or tepid sea water. They may also remember how casually many marines discarded or abandoned clothes that were worn or dirty. A man could carry several changes in a transport pack and unit quartermasters always seemed able to provide additional utility suits. The expensive and bulky woolen clothing for winter warfare will also become worn and muddy at a rapid rate—but it will have

The green jacket is worn over sweater to complete under garments of cold weather combat clothing.



to be cleaned and cared for as it will not be possible to replace it in such a lavish manner.

At the same time the individual marine cannot be expected to carry and care for clothing that he does not have immediate need for. In addition to the clothing that the marine is wearing to cope with the temperature of the season he should be expected to carry only such small additional items in his pack as a sweater, spare socks, mittens and muffler. All additional layers of clothing should be in battalion or regimental property and issued as need. An assault marine can not function properly if burdened with a heavy pack full of additional clothing and sleeping gear.

MajGen J. E. Sloan USA, Commanding General of the 88th Infantry Division writing on *Training and Combat Lessons—Experiences of a New Division in Italy** has this to say:

"Another lesson with relation to supply has been apparent in the need of more economy and a greater degree of common sense in the matter of the soldier's personal equipment carried into combat. Experience has shown that much waste and considerable loss occurs when units are sent into the combat area with full Table of Equipment allowances of individual equipment. The

*Military Review November 1944

The M1943 field jacket, cotton OD trousers, and cap form the first layer of outer garments worn.



soldier should carry with him only the bare necessities. Army supply units including bath and clothing exchange units should be pushed well forward and be readily available within easy reach of the divisions. The divisional units when coming out of the line can then replace losses and unserviceable clothing and equipment without delay; and they can effect the salvage of soiled clothing and worn but salvageable articles, thus reducing losses of equipment and adding at the same time to the physical well-being, comfort, and morale of the individual soldier."

Here we see mention of the system of clothing exchanges that the Army employed in the ETO in order to keep men in clean clothes yet not have to be concerned with carrying and cleaning personal clothing. The combat marine does not have time to properly launder woolen clothes nor can be depend on obtaining spare clothing from his clothing bag or baggage pack, often miles away.

The U.S. 3d Infantry Division saw many months of winter warfare in the mountains of Italy and France and thereby gained valuable experience in the supply and care of winter clothing. LtCol D. A. King, Assistant Chief of Staff, G-4, of the 3d Division explains in an article, *Divisional Baggage*, the system employed by that

The parka is a fine piece of clothing for extreme cold weather but is bulky and constricts movement.



ANSWERS TO "FIGHTING PRESIDENTS"

On page 14

- 1. James Monroe
- 2. George Washington
- 3. Franklin D. Roosevelt
- 4. Andrew Jackson
- 5. Ulysses S. Grant
- 6. John Adams
- 7. Theodore Roosevelt
- 8. Abraham Lincoln
- 9. Zachary Taylor
- 10. James A. Garfield

veteran unit in handling the clothing problem.* The division was on the Anzio beachhead and there was little prospect of arrival of the divisional baggage and the spare clothes.

"The situation was far from encouraging. Each infantryman had on the beachhead only the clothing he wore. New issues were limited, being insufficient to provide a second uniform to each man. And there were no

*Military Review July 1946

The parka hood affords protection for the chin as well as the head. It is worn over the storm cap.



laundry facilities on the beachhead, even the civilians having been evacuated.

"The 7th Infantry Regiment initiated the new system on a small scale by building a small laundry unit. The new clothing issued by the Quartermaster was not issued to individuals but was put out by the Regimental Service Company to a regimental unit on an exchange basis. The soiled clothing received was immediately laundered and reissued on an exchange basis to another regimental unit (battalion). The two characteristics of the Regimental Reserve System were thus established. First, clothing lost its individuality, an infantryman no longer having any individually owned garment, but only one of each type of garment. Second, two sets of clothing per individual was not necessary, the second set being necessary only in sufficient quantity to change one battalion provided adequate laundry facilities were available.

"The system makes it possible to provide the infantry soldier with a clean uniform whenever his unit is not engaged with the enemy.

"The saving in clothing is one of the most astonishing aspects. Regardless of directives, punishment, and statements of charges, an infantry soldier in combat is indifferent to clothing responsibility, and no practical system has been devised to change his attitude.

"The practical solution is to have small mobile laundry units issued on the basis of one unit per regiment, one per division artillery, one per special troops in an infantry division. A complete unit of water heater, tumbler, extractor, and drier could be mounted on two one-ton trailers. The issue of one per regiment is by far the most critical need, and will solve one of the most difficult administrative problems now faced by a division."

Here we see how one of the Army's best combat divisions handled the task of supplying, cleaning, and maintaining the bulky and varied items of winter clothing that can become a burden to the combat infantryman. It would appear to be a good basis for administrative SOP to answer the problems of fast moving Marine units in winter operations.

In summary, the special problems of dressing for combat in cold weather that today face the Marine Corps consist of; a thorough understanding of how to wear and care for the fine clothing that is today available, how to apply the layer principle in dressing for cold weather, making cleaning and salvage plans that will care for and conserve the woolen clothing taken upon an operation. We must not burden the fighting marine with extra and spare clothing, but should have a workable supply SOP to get him clean, dry clothes when needed. And we must constantly supervise to see that all concerned are properly dressed so that at no time does cold weather, snow, or wet, interfere with the efficiency or well-being of the command.

NROTC Resume

By Capt Jules S. Rouse

THE NROTC WAS FIRST ESTABLISHED IN SIX UNIVERSITIES IN 1925. The present NROTC implements a part of Public Law 729, approved 13 August 1946 and known generally as the Holloway Plan, for the peacetime training of naval officers, and institutes the selection and training of officer candidates for the Navy and Marine Corps by means of naval scholarships in colleges and universities throughout the country.

Present law authorizes a total enrollment at any one time of 14,000 regular NROTC students as midshipmen, USNR, in the 52 NROTC units established throughout the United States. A yearly nation-wide aptitude test is given to high school graduates, or persons of equivalent educations, between the ages of 17 and 21 to select students for the yearly input into the NROTC. On 13 December 1947 the examination was given to select the 2500 students who will enter the program this fall. Of this number, approximately 10 per cent will be qualified enlisted men of the Navy and the Marine Corps who will be discharged to enter the NROTC.

A regular NROTC student will have his tuition, fees, and text-books paid by the government, his uniform furnished, and in addition will be paid a yearly retainer fee of \$600. While in college he may choose any course that leads to a baccalaureate degree, but must take 24 semester hours of naval science besides certain requirements in mathematics, physics, and English. In return for these benefits the regular NROTC student must agree to attend three summer cruises or training periods of from six to eight weeks each; to accept a commission as an ensign, USN, or second lieutenant, USMC, upon graduation; and to serve from 15 to 24 months on active duty after being commissioned. At the end of this time he will be given an opportunity to serve an additional year and to apply for a permanent commission in the regular Navy or Marine Corps. If he does not choose a permanent commission or is not selected for one, he must accept a commission in the Reserve and not resign it before the sixth anniversary of the date of his commissioning.

Besides the 14,000 regular NROTC students, an additional 1500 contract NROTC students are authorized. These students are selected locally by the professor of naval science at each unit from students already in attendance at the school and must meet the same educa-

tional and physical requirements as the Regulars. In exchange for 24 semester hours of naval science and one summer cruise or training period of approximately three weeks duration, they receive payment of commutation of subsistence during their last two years in college, their uniforms, and a commission in either the Naval or Marine Corps Reserve upon graduation. They are not obligated to go on active duty for a stipulated period upon being commissioned as the regulars are.

All NROTC students take the same naval science courses the first five semesters. At the end of this time 16% of any class who desire to be considered for Marine Corps Commissions may voluntarily request transfer and will take Marine Corps naval science courses the remaining three semesters. They will continue to be NROTC midshipmen and will wear the same uniforms and insignia specified for all NROTC members; however, in lieu of attending the third summer's cruise Regulars will undergo an eight week training period at Quantico, while Marine contracts will attend a three week course. Upon being commissioned, regular NROTC students will attend The Basic School at Quantico before being assigned to duty with troops.

THE HEAD OF THE DEPARTMENT OF Naval Science and the commanding officer of the NROTC unit at an institution is either a Navy captain or Marine colonel with the title of Professor of Naval Science, while the executive officer is a commander or lieutenant colonel and is an associate professor. The Marine Corps is authorized to have two PNSs and four executive officers in the program. Most units have three naval officers and one marine as instructors, with academic ranks dependent upon military ranks. Majors, captains, and first lieutenants were assigned as the first Marine officer instructors; however, the present tendency in making reliefs is to assign only majors. Each unit also has a staff NCO.

Since the NROTC program under the Holloway Plan began in the fall of 1946, the Marine part of the plan will not get into full swing until early in 1949 when the freshmen of 1946 finish their five semesters and become eligible to transfer to the Marine Corps naval science courses. Most units at the present time have but a few Marine students, and the majority of these are contracts who transferred from the wartime V-12 program.

In the interim the Marine instructors have had varied assignments. Some have been teaching naval orientation and seamanship (the freshman Naval Science course) or ordnance and fire control (the sophomore course), while others have been serving as aides to the executive officers or have been kept busy with a collection of duties. Besides classroom instruction the Marine officer is also responsible for teaching all of the NROTC students close order drill, and at most units he is in charge of the rifle and pistol teams.

Message Center

Operation Retrograde . . .

DEAR SIR:

Let this be a lesson to anyone foolish enough to think he can breathe a kind word about withdrawal in a Marine Corps publication. I am such a fool. My mood of self-reproof knows no bounds. I have duly marked that loathsome word with the notation "Do not use in any Marine Corps manuscript. Far better to serve martinis at a banquet of the W.C.T.U."

My punishment for having written Target Eurasia and the Next War in the December Gazette will require several years, I am fully aware, at the hands of the Corps. Yet I have already a taste of what's coming from LtCol Frederick P. Henderson's Concerning "Target Eurasia" in the March issue. The Colonel, in a masterful presentation of contemporary geopolitics, not only refuted my thesis with skill but made enemies for me that I could never hope to earn for myself. Maj George Fielding Eliot, for example. I have never met the man and never mentioned him, but thanks to Col Henderson I am suddenly elevated to undeserved peerage for having advocated a thesis "similar" to one Eliot recommended in 1938. Now how is Eliot going to feel about a dastardly accusation like that?

Col Henderson, in giving me the vigorous treatment, also put words in my article which I hadn't the resource to think up for myself, let alone include in the article. For example, he summarized the little essay as something which described itself as "an 'alluring' concept of the easy way to win what would be the most stupendous of all wars, World War III." No, sir. And again the Colonel (possibly the light is bad in Quantico) asserted that I had recommended "hundreds of landings and withdrawals" whereas I observed that our combat teams "could hit and withdraw in hundreds of places." There is quite a difference.

Col Lew Walt, in his letter "Retreat Hell," came up with a bit milder rebuttal, probably because he knows my limitations better: but then expressed, more clearly than I had, the very stratagem I had in mind; namely, "Why not (after landing)

Each month the GAZETTE will pay five dollars for each letter printed. These pages are intended for comments and corrections on past articles and as a discussion center for pet theories, battle lessons, training expedients, and what have you. Signatures will be withheld if requested.

stay in position, go on the defensive temporarily make use of the advantages of terrain, your naval gunfire, artillery and air support—let the enemy attack you—let him move into prepared barrages . . . etc."

That's what I meant when I suggested "Remain long enough to attract such reinforcements from adjacent localities and which will provide targets of opportunity for our own aircraft and our own forces."

But this course cannot be pursued if the landing force is doomed to be surrounded, in days or weeks, by an overwhelming counterforce. In other words, if it can't get away.

I think it all boils down to military semantics. Mobility and maneuverability are great friends of any smart commander. Heretofore, military orthodoxy, especially in the Marine Corps, has stripped from most of our planning—yes all of our planning—the possibilities of moving rearward, of withdrawing. The very thought is anathema to us. Proof are the very intense rebuttals printed by the GAZETTE. And anyone who studied Marine Corps tactics in World War II could safely conclude that there is one direction the Marines will never go.

There was a time when an amphibious force simply could not withdraw without inviting disaster, but it is my opinion that the very devices, equipment and doctrines perfected by the Corps make that no longer true. Therefore, why not reap all the possible advantages of this fact?

A reconnaissance in force implies the ability to withdraw. On a scale worthy of its implications it was not the Marine Corps, but Gen MacArthur, who used reconnaissance in force to win a whole new chain of islands (the Admiralties) and to slice two months off the Pacific timetable. In February 1944 Gen MacArthur noted a weakness on Los Negros Island, led light forces of the 1st Cavalry Division ashore there and gave them orders to hold if they could. They did-and were reinforced. It is implicit that he would not have taken this gamble if the APDs that took them in couldn't-if necessary-have taken them out. By-passing Mindanao, and gambling on the opportunity at Leyte, was another, if less vivid, illustration of the risks you can take if you have a two-way and three-way stretch, in your list of possible directions. It was to underline this fact, and to attempt to rid the Corps of its obsession against that loathsome word, withdrawal that Target Eurasia was written. I have failed in the letter. If we change the word to something new, as Direction Z, maybe the Corps could swallow both.

Guy Richards, Major, USMCR.

Simpler Administration . . .

DEAR SIR:

Maj Heinl's article in the January GAZETTE, The Rising Tide of Administration, was one of the best I have read in a long time. I am in whole-hearted agreement with all that he says, as are the majority of others officers with whom I have discussed this article.

I would like to add, however, one more cure to the three he gives for remedying the administrative illiterate-administrative caste dilemma. That is—reduce the body of administrative orders, rules, and instructions from their present vast and complex bulk back to the point where the average officer can keep up with them, understand them and still perform his primary duties. It seems to me that this is the first step that must be taken if we are ever to raise the administrative IQ of the great majority of Marine officers.

Prior to the war any officer could keep abreast of the administrative situation with little trouble. The MCM was the "Bible" and it and the necessary supplementary reference material took up no more than 6 inches between the First Sergeant's bookends. Changes in these instructions were relatively infrequent and could be digested by all. Now however, it requires at least the proverbial five-foot book shelf to contain all the necessary administrative source material, and changes, modifications, rescissions and new orders come in with every mail or message center run.

In my own case, I have degenerated from an administratively literate junior officer in the "old Marine Corps" to an administratively illiterate senior officer in the new. The reason is simply that I can not keep up with the ever-changing and ever-expanding administrative instructions and still perform my assigned duties satisfactorily. We have made administration a full time job and thereby brought into being the administrative caste.

We must turn the rising tide of administration to an ebb tide by reviewing, simplifying, and reducing our current body of administrative instructions and by insuring that the instinct of the paperwork artists to put out an order or memo on any subject that arises, no matter how trivial, is sternly suppressed.

LtCol Illiterate

Officers' Manual . . .

DEAR SIR:

Maj Heinl's solutions to the problem, although far-reaching and well balanced, do not include the great bulk of the reserve officers, both of the organized and volunteer components, who are particularly hard pressed for ways and means of adding to their administrative abilities. It is these reserve officers, in the event of another mobilization, who will be called upon to exercise considerable authority in the Corps and who will be perfect ten-pins for another group of the administrative elite.

To eliminate this phase of the problem, I would like to sug-

gest that an administrative manual for officers be published, a book printed by the GAZETTE and sold of course for profit, which would include all the necessary knowledge and information attendant upon the execution of the sundry administrative duties which line officers normally encounter. I do not intend to imply that this manual should be another rehash of the Marine Corps Manual, or the Naval Courts and Boards, but rather it should be a step by step account, well illustrated, of what the officer should do and how he should do it, in order to accomplish any given administrative job.

A brief chapter should be included covering the reports normally prepared by the first sergeant, but with the emphasis on the interpretation of them. By that I mean the normal basis for each entry, when it is normally prepared and normally due, to whom the report goes, what use is made of it in the higher echelon, and any other item the officer should know when he affixes his signature to the report and assumes the responsibility for it.

From this base the manual should go on to cover the less frequent administrative details. For example, in the case of a checkage against a man who has lost an item of individual equipment on charge to him, the manual should begin at the point where the loss was first discovered. From there it should go on to the next step involved, who initiates the step and how it is taken, precisely what follows, what forms are used, and when the operation has been completed.

The manual should be written from the viewpoint of an officer who is assumed to know nothing whatever about the particular operation involved. It should cover all the administrative details of a company commander, and it should be expanded as it progresses to include those of the battalion adjutant, the regimental adjutant, and perhaps the division adju-

4th Marine Division Reunion

THE FIRST POSTWAR REUNION of the 4th Marine Division will be held in Kansas City, Missouri, on June 4th and 5th. The program for the two day affair includes the Marine Band plus the drum and bugle corps from Quantico. The Commandant of the Marine Corps will attend.

The hotels in Kansas City have made arrangements for rooms to be available, at members' expense, for the two day period. Requests for hotel reservations may be made by writing the Fourth Division Association Headquarters, Quantico, Va. Former division members, unable to make a definite request but with a possibility of attending, should also let Association Headquarters know. This information is needed as quickly as possible in order to estimate the attendance. When a hotel reservation is requested, \$5.00 should be enclosed for the banquet ticket.

tant. It should include all the types and forms of orders such as special orders, general orders, etc., their use and interpretation. It should discuss the initiation and preparation of the speed-letter and other forms of communication other than the ordinary mail.

Some part of the manual should be devoted to naval law, not duplicating the Courts and Boards, but rather concentrating on the manner of initiating a trial, what is expected of each officer who sits in judgment, and how an officer should go about insuring that the results of a trial are administratively correct.

The manual should also include a section on the more mundane phases of Marine Corps existence, such as how to take over and administer a mess hall.

While I offer the suggestion of this manual as a means of explaining the operation of administration to those such as I who had no opportunity to learn about it during World War II, and to those officers who have since and who will be commissioned in the reserve, I submit that it should not attempt to supplant the Marine Corps Manual as the guide to administration, but only to remove the mystery behind such phrases as "checkage will be made."

Louis G. Madsen, Captain, USMCR

Savings Plan ...

DEAR SIR:

In its March 1948 issue the GAZETTE published an interesting article on Savings Bonds; however, enlisted men can do well by investigating the savings afforded by depositing their money with their disbursing officer. Compare the figures listed below and you have your answer on what the *best* form of investment is.

Investment of \$1000.00 for ten years brings— \$1410.39 (Approx) deposited with USMC. 1333.33 (Approx) invested in Savings Bonds.

\$ 177.06 (Approx) profit from investing in USMC deposits instead of Savings Bonds.

Men should be cautioned, however, that since money deposited with USMC cannot be obtained until end of enlistment; a man should have some bonds available for emergency use. We should all have bonds but let's not lose sight of what the *best* investment is.

> Joseph B. Courville, MSgt, USMC.

ED: Enlisted Men's Deposits, as established by Naval Regulations, Article 1781, and Marine Corps Manual, Article 25-30, do pay a higher rate of interest than Savings Bonds—4 per cent annually on any sum deposited for six months or longer. BUT, there are several disadvantages. One, as MSgt Courville has pointed out, is that there is no provision for withdrawals—even for

emergencies — except on discharge or release from active duty. Another is that deposits cannot exceed a man's total pay and allowances, and cannot be made in sums exceeding a three months' total of pay and allowances. However, upon expiration of enlistment or other discharge, the accrued balance plus interest may be redeposited and mustering out pay, reenlistment allowances, and mileage may be deposited.

Not Such a Picnic . . .

DEAR SIR:

One thing in Fletcher Pratt's history of the Marines has set my teeth on edge time and again. He has had access to Japanese documents and has presented for the first time a clear picture of the Japanese strategy, the Japanese point of view, and the Japanese battle accounts. It is unfortunate, however, that he always refers to the Japanese fighters in either contemptuous or faintly ridiculous terms. In his pages, they appear as "little brown monkeys," quarreling among themselves, "hissing politely," and carrying out such quaint ideas as blowing themselves up indulging in banzai attacks.

In the first place, it is a poor service to the Marine Corps to depreciate continually the quality of opposition that the Marines faced. When the chips are finally down and the figures added, the Japanese warrior is going to be rated as one of the toughest opponents that any army ever faced. He was cruel, treacherous, skillful; even when poorly trained he was fearfully effective in his underground fortifications; his habit of not surrendering made him dangerous even when all large scale organization had ceased - thousands of marines were wounded in engagements that probably would not have happened in European warfare; his banzai attacks, even though suicidal, were formidable and no man ever in one is likely to regard them as negligible however foolish they may seem in retrospect. A careful check on casualties from Tarawa on would probably show that every Japanese killed succeeded in wounding or killing a marine before his taking off. The overconfidence of the Japanese has been offered as the reason for the amazing discrepancy in casualties at Guadalcanal. It could be, however, that Guadalcanal was the pay-off on twenty years of training veteran riflemen.

In second place, it is not at all obvious that the strategy of the Japanese High Command was either wrong or foolish. Granted that their basic premise was wrong—that the United States would not go to war once Japan had established its Asiatic empire, or would wage only a defensive war—her conquests and her method of defending them were logical. With a relatively small force she possessed herself of a vast empire, in a brilliantly executed campaign. In that campaign she displayed an unusual grasp of the interdependence of air, land, and sea forces, and demonstrated a skill in the use of amphibious tactics at that time superior to that of the Marine Corps. When the United States did attack her, we attacked on her

own terms—at the edges of her empire, and it was nearly two years before we accomplished the strategical surprise of the Marianas' landings. After Tarawa, Japan learned as rapidly as the United States—and even though her resources were limited, the defense of Okinawa, the probable defense that would have been put up on Kyushu, make one shudder in retrospect. Japan was a fierce foe dangerous to the very end.

At times, Fletcher Pratt treats the war in the Pacific as if it were a vast and jaunty picnic, the point of view of the spectator rather than the participant. The difficulty with this point of view is that though it gives adequate credit to the valor of the Marines, it continually understates the tactical and technical skill they used against not only a determined enemy but a very shrewd one.

PHILLIPS D. CARLETON, Major, USMCR

Angry Regular . . .

DEAR SIR:

I would like to give a short reply to the Marine Reserve Sergeant who so coyly withheld his name from the letter concerning Reserves and Regulars which was published in your March issue.

I wonder if the Sergeant ever stopped to think that a few of us regulars served four years and over and went through several campaigns before we made sergeant even though our records are spotless and our efficiency grades are all above 4.8.

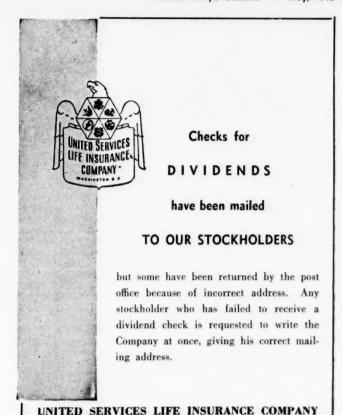
So—he spent two weeks at Camp Pendleton last year, how touching. What about the guys who spent six months or more there back in '42 or '43, and then went over and used their training where it would do some good. Lots of them are still just sergeants.

I'm not griping about myself not making rates any faster than I have; I know several marines (not Reserves) who are only sergeants after serving six or eight years in the Corps. In my opinion a man is not qualified to be a Marine sergeant until he has at least four years' service.

It just burns me up to see someone who has been in the Organized Reserve for "a year or more" and who has undergone two weeks of *strenuous training* at Camp Pendleton and who was probably handed a Reserve sergeant's rate because there just didn't happen to be any one else to give it to say that he wants to be a sergeant in the Regulars for those reasons.

I would like to add a final word—if he wants to be a Marine sergeant let him come in as a private and earn his rate by a lot of hard work like the rest of us have.

N. B. WYNN, Sgt, USMC.



Uniforms Again ...

1600 20th Street N. W.

DEAR SIR

As long as the trend of your printed letters in the "Message Center" continues to dwell on the subject of uniforms, I would like to throw in my "two cents worth."

Since the Marine Corps Recruiting Service is one of the most important gaps in converting "civvies" into good marines, and is in the eyes of the general public perhaps more than any other branch of the Marine Corps, I think it only fitting that a proper uniform be assigned them for winter wear instead of the haphazard garb I see them wearing in my area.

I have noticed the members of recruiting teams out of the Columbia, S. C. office, who call weekly in my hometown, mixing enlisted blues with the green winter overcoat.

Even in civilian dress, such a clashing of colors is enough to make a man look like a "Rube" who's never heard of Esquire, but when marines, who are supposed to be the cream of the military, turn up dressed in such a "costume" as this, then I think it's time something should be done.

Perhaps you've received other letters dwelling on this same subject, but since I've never seen anything in the "Message Center" about it before, I am in favor of presenting this topic to the GAZETTE readers for discussion.

E. P. UNUM, 1stLt, USMCR.

Washington 9, D. C.

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What the Commandant Has to Say . . .

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HEADQUARTERS U.S. MARINE CORPS

Washington

13 February 1948

MEMORANDUM FOR: All Marine Officers.

Subject: Marine Corps Gazette.

- 1. Since 1916, the Marine Corps GAZETTE has been published as the professional magazine of the Marine Corps. During the years of its existence, the GAZETTE has become firmly established as the sounding board for new theories and developments within the Corps, and as a forum for the exchange of professional ideas and comment among Marines. In its present stage of development, the GAZETTE compares favorably with any military journal in the world, and stands foremost in its special field of amphibious warfare.
- 2. A Marine's magazine in every sense, the GAZETTE depends largely upon Marine officers and men for both revenue and material. Since all proceeds are used to improve the magazine itself, it is obvious that the benefits fall to the Marines who read it. Similarly, the Marine who chooses to contribute articles to the GAZETTE is not only paid for his efforts but is also afforded the opportunity to disseminate his theories and comments among others of his chosen profession.
- 3. It is considered that membership in the Marine Corps Association, which carries with it a subscription to the Marine Corps GAZETTE, offers every Marine, and particularly those in commissioned and noncommissioned ranks, an opportunity to stimulate his professional advancement.
- 4. Commanding officers should bring this information to the attention of all enlisted men under their command.

C. B. CATES, General, U. S. Marine Corps, Commandant.



The Whiskey War in Brooklyn

FILLICIT STILLS AND BATTLES WITH REVENUE agents are usually associated with the Great Smoky Mountains and lean mountaineers sighting in with squirrel rifles. The streets of Brooklyn hardly seem the place for such activities—but 80 years ago they were the scene of skirmishes as angry whiskey makers assaulted Federal agents and marines with bullets and bricks.

In 1867, Brevet LtCol J. L. Broome and four companies of marines made the first of their sorties into the Irishtown section, aiding revenue agents in a move against distilleries that had been defrauding the government. The mission of the troops was described as of a "peculiarly delicate nature," but they had no difficulty in performing it. By 1870, however, the distillers' resistance had stiffened. In March of that year, J. K. Wass, assistant assessor of the Third New York District, asked RearAdm S. W. Gordon for assistance.

The admiral sent Col Broome, commanding the Navy Yard MB, and 129 men, each with a loaded musket and 40 rounds of ball. A barrage of bricks and stones greeted the Marines as they occupied the Plymouth street area. A policeman was hit on the head as more stones came from the housetops. When the troops deployed as if to fire, there was no more violence from the mob in the street, though occasional bricks were lobbed from the roofs as the T-men destroyed two distilleries. Their mission accomplished, the agents and the Marines moved out, followed by a cursing crowd. A half-mile from Irishtown the revenue men dropped out of the column and turned up Myrtle avenue. As the Marines were moving on, the mob rushed up the avenue after the still-smashers; 1stLt Henry J. Bishop had to double back with some of the troops to scatter the crowd.

In November 1870 a force of 245 marines led by Col Broome was occupied for three days with the same sort of mission. This time so many bricks were thrown that the troops twice charged the mob. The Marines eventually had to occupy the roofs and upper floors of adjacent houses to end the stone throwing.

In January Col Broome's men from the Brooklyn Navy Yard, with a detachment of the 8th Infantry, stood by while two large distilleries were destroyed; the next day the Marines took over guarding the distilleries and seized material.

Six months later Marines at the Yard were alerted at 0300 one morning to protect a large force of government officers led by Gen James Jordan, the assessor. The party was on its way to arrest distillery proprietors and some predecessors of modern mobsters. Gen Jordan requested Col Broome to hold his men in the Yard at the York street gate until needed.

The colonel accompanied the federal agents to Dixon's alley, where the force split up on separate assignments. As one group moved up the alley, it ran into rapid fire from men lying prone in the street or hidden in wagons and houses. The first burst of firing mortally wounded one government officer and two others were hit. Col Broome ordered up the Marines and returned the fire with his revolver.

1stLt George M. Welles brought the troops up on the double and the gang stopped shooting, fleeing through the dark alleys. Col Broome posted guards and ordered residents of nearby houses away from their windows, while U. S. marshals made forcible entries to arrest the men they sought.

In another two months the colonel and some of his men embarked one morning at 0100 on the Catalpa, a small craft, to aid Gen Jordan in seizing vessels with contraband whiskey. This small-scale amphibious operation ended at dawn at Irishtown, as usual, after a vain search at Williamsburg and other points for liquor-laden ships. Even the Irishtown wharves were empty, though the assessor had definite information on smuggling. The craft with contraband evidently had received warning of the raid.

A fifth and final raid, an extensive one, was made in October with Marines guarding property and the agents as they moved from one area to another. It was dull duty until late in the day when a mob stoned a small detachment under Lt E. T. Bradford. A sergeant was wounded before the crowd was dispersed, with one man held for the civil authorities.